



PRIMARY MATHEMATICS

P1-P6 MASTER KNOWLEDGE COVERAGE MATRIX

Version 3 | MOE Cross-Checked | Advanced Level

A structured 40-week curriculum progression for every primary level

Complete Coverage | Spiral Progression | Assessable Knowledge Points

Prepared for PSLE Checkpoint curriculum planning and assessment design

PSLE Checkpoint Primary Mathematics P1-P6 Master Knowledge Coverage Matrix V3 - MOE Cross-Checked Advanced

MOE-aligned 40-week progression cross-checked against all six supplied content lists, with atomic spiral tagging and explicit maintenance.

Grade	Weeks	KP Allocations	Core Range	Advanced Emphasis	End-of-year Transfer	Primary Reference	Status
P1	40	164	Whole numbers to 100; +/- within 100; early x/÷; length, time, money, shapes, picture graphs	Subitising, efficient strategies, simple bar models and reasoning	Independent P1 mastery plus readiness for P2	Primary 1 content list.jpg + MOE syllabus	Complete
P2	40	165	Whole numbers to 1000; algorithms; tables 2-5, 10; fractions; mass, volume, time, money, graphs	Two-step models, early fraction-of-set and data claims	Independent P2 mastery plus readiness for P3	primary 2 content list.jpg + MOE syllabus	Complete
P3	40	168	Whole numbers to 10 000; four operations; tables 6-9; fractions; bar graphs; angles, lines, area/perimeter	Heuristics, evidence-based graph interpretation and model choice	Independent P3 mastery plus readiness for P4	primary content 3 list.jpg + MOE syllabus	Complete
P4	40	165	Whole numbers to 100 000; factors/multiples; fractions; decimals; angles; graphs; nets; symmetry	Decimal reasoning, spatial visualisation and multi-fact geometry	Independent P4 mastery plus readiness for P5	primary 4 content list.jpg + MOE syllabus	Complete
P5	40	167	Whole numbers to 10 million; fraction multiplication; decimals; rate; percentage; triangle area; volume; geometry	Early algebra/average bridge and complex proportional models	Independent P5 mastery plus readiness for P6	primary 5 content list.jpg + MOE syllabus	Complete
P6	40	168	Fraction division; ratio; percentage change; speed; algebra; circles; composite figures; volume; average	Non-routine PSLE transfer, invariants, assumptions and rigorous checking	Independent P6 mastery plus readiness for PSLE and Secondary 1	primary 6 content list.jpg + MOE syllabus	Complete

Design principles		
1	Atomic KP first	One assessable concept or process per KP; compound applications are labelled integrated transfer.
2	Concrete-pictorial-abstract progression	Representations precede formal procedures, especially in P1-P3.
3	Spiral learning	High-value strands recur with wider number ranges, more abstract representations and deeper problem structures.
4	Advanced but age-appropriate	Extensions strengthen reasoning and transfer without pulling secondary mathematics down indiscriminately.
5	Problem solving every term	Bar models, heuristics, estimation, checking, communication and non-routine transfer are explicitly scheduled.
6	Assessment ready	Every week has 3-5 KPs suitable for separate diagnostic assessment and later reassessment.

P1 Mathematics - Complete 40-Week Knowledge Point Plan

MOE core, deliberate spiral maintenance and clearly labelled age-appropriate extension. Every atomic KP is family-tagged.

Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P1	1	1	1	Number & Algebra	NA-WN	PS-REASON	Introduce	MOE Core	4	Numbers to 10: counting and quantity	1. Count objects accurately using one-to-one correspondence 2. Recognise numerals 0 to 10 3. Match numerals to quantities 4. Subitise small quantities and explain how they are seen	Develop numbers to 10: counting and quantity through accurate representations, explanation, strategy choice and one unfamiliar application.	Preschool counting, comparison, shape and pattern foundations	Concept recognition, procedural accuracy, application and explanation
P1	1	2	2	Number & Algebra	NA-WN	PS-COMM	Develop	MOE Core	4	Numbers to 10: representations and comparison	1. Represent numbers with objects, drawings, ten-frames and number lines 2. Read and write number words to ten 3. Compare two sets using more, fewer and equal 4. Order numbers from least to greatest	Develop numbers to 10: representations and comparison through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 10: counting and quantity; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	3	3	Number & Algebra	NA-WN	PS-REASON	Develop	MOE Core	4	Number bonds within 10	1. Decompose numbers within 10 in more than one way 2. Complete part-part-whole number bonds 3. Identify missing parts in number bonds 4. Explain commutative pairs using concrete models	Develop number bonds within 10 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 10: representations and comparison; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	4	4	Number & Algebra	NA-AS	NA-WN	Introduce	MOE Core	4	Addition concepts within 10	1. Interpret addition as putting together and adding on 2. Use + and = correctly 3. Write addition sentences from pictures and stories 4. Find sums within 10 using counting-on and number bonds	Develop addition concepts within 10 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Number bonds within 10; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	5	5	Number & Algebra	NA-AS	PS-MODEL	Develop	MOE Core	4	Subtraction concepts within 10	1. Interpret subtraction as taking away and finding a difference 2. Use – and = correctly 3. Write subtraction sentences from pictures and stories 4. Find differences within 10 using concrete and pictorial models	Develop subtraction concepts within 10 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition concepts within 10; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	6	6	Number & Algebra	NA-AS	PS-CHECK	Develop	MOE Core	4	Addition and subtraction relationships	1. Relate addition facts to subtraction facts 2. Build fact families within 10 3. Find an unknown part in a simple equation 4. Check subtraction using addition	Develop addition and subtraction relationships through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Subtraction concepts within 10; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	7	7	Number & Algebra	NA-WN	MG-GEO	Develop	MOE Core	4	Ordinal numbers and positions	1. Use first to tenth and 1st to 10th 2. Describe position in an ordered line 3. Distinguish ordinal position from quantity 4. Solve simple position-change problems	Develop ordinal numbers and positions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition and subtraction relationships; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	8	8	Measurement & Geometry	MG-GEO	—	Develop	MOE Core	4	2D and 3D shapes	1. Identify circle triangle square and rectangle 2. Identify cube cuboid cone cylinder and sphere 3. Sort shapes by observable properties 4. Compose and decompose simple shapes	Develop 2d and 3d shapes through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Ordinal numbers and positions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	9	9	Number & Algebra	NA-ALG	—	Introduce	MOE Core	4	Patterns and early algebraic thinking	1. Continue repeating patterns 2. Identify the repeating unit 3. Create and describe a pattern 4. Find a missing item in a visual or number pattern	Develop patterns and early algebraic thinking through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: 2D and 3D shapes; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	1	10	10	Problem Solving & Mathematical Processes	PS-REASON	NA-AS, PS-CHECK, NA-ALG	Master / Transfer	Spiral Maintenance / Transfer	5	Term 1 mastery and reasoning	1. Retrieve numbers bonds and facts within 10 2. Solve one-step addition and subtraction stories 3. Explain a chosen strategy using words or pictures 4. Identify and correct a simple mathematical error 5. Complete a short non-routine pattern task	Develop term 1 mastery and reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Patterns and early algebraic thinking; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P1	2	1	11	Number & Algebra	NA-WN	PS-COMM	Develop	MOE Core	4	Numbers to 20	1. Count forward and backward within 20 2. Represent teen numbers as ten and ones 3. Read and write numerals and number words to 20 4. Compare and order numbers within 20	Develop numbers to 20 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 1 mastery and reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	2	2	12	Number & Algebra	NA-WN	—	Develop	MOE Core	4	Number bonds to 20	1. Decompose teen numbers into ten and ones 2. Build number bonds within 20 3. Use make-ten combinations 4. Find missing parts within 20	Develop number bonds to 20 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 20; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	2	3	13	Number & Algebra	NA-AS	NA-WN	Develop	MOE Core	4	Addition within 20	1. Add within 20 using make-ten 2. Use counting-on efficiently 3. Add three one-digit numbers 4. Choose an efficient addition strategy	Develop addition within 20 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Number bonds to 20; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	2	4	14	Number & Algebra	NA-AS	NA-WN	Develop	MOE Core	4	Subtraction within 20	1. Subtract within 20 by taking from ten 2. Use counting-back and think-addition 3. Find a difference by comparison 4. Choose an efficient subtraction strategy	Develop subtraction within 20 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition within 20; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P1 Mathematics - Complete 40-Week Knowledge Point Plan

MOE core, deliberate spiral maintenance and clearly labelled age-appropriate extension. Every atomic KP is family-tagged.

Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P1	2	5	15	Number & Algebra	NA-AS	—	Develop	MOE Core	4	Mental calculation within 20	1. Recall core addition facts within 20 2. Recall related subtraction facts 3. Use doubles and near doubles 4. Use compensation for simple mental sums	Develop mental calculation within 20 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Subtraction within 20; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	2	6	16	Problem Solving & Mathematical Processes	PS-REASON	NA-AS, PS-MODEL	Develop	MOE Core	4	One-step word problems	1. Identify the whole and parts in a story 2. Distinguish addition from subtraction situations 3. Represent a problem with a bar model 4. Write a complete number sentence and answer	Develop one-step word problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mental calculation within 20; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P1	2	7	17	Problem Solving & Mathematical Processes	PS-REASON	PS-MODEL, PS-CHECK	Develop	MOE Core	4	Comparison problems	1. Interpret more than and fewer than 2. Find how many more or fewer 3. Use a comparison bar model 4. Check whether the answer is reasonable	Develop comparison problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: One-step word problems; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P1	2	8	18	Statistics	ST-DATA	—	Introduce	MOE Core	4	Picture graphs	1. Read a one-to-one picture graph 2. Identify greatest least and equal categories 3. Find totals and differences from a graph 4. Complete a graph from given data	Develop picture graphs through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Comparison problems; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P1	2	9	19	Statistics	ST-DATA	PS-REASON	Develop	MOE Core	4	Data questions and simple inference	1. Ask and answer questions about picture-graph data 2. Combine information from two categories 3. Identify a statement supported by data 4. Explain one simple observation	Develop data questions and simple inference through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Picture graphs; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P1	2	10	20	Problem Solving & Mathematical Processes	PS-REASON	ST-DATA, PS-MODEL, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	Term 2 mastery and transfer	1. Retrieve numbers and operations within 20 2. Solve mixed one-step problems 3. Interpret a picture graph 4. Use a bar model independently 5. Check answers using inverse operations	Develop term 2 mastery and transfer through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data questions and simple inference; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P1	3	1	21	Number & Algebra	NA-WN	PS-COMM	Develop / Apply	MOE Core	4	Numbers to 100: place value	1. Count in ones and tens to 100 2. Represent 2-digit numbers as tens and ones 3. Read and write numerals and number words to 100 4. State the value of a digit	Develop numbers to 100: place value through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 2 mastery and transfer; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	2	22	Number & Algebra	NA-WN	PS-CHECK	Develop / Apply	MOE Core	4	Numbers to 100: comparison and order	1. Compare 2-digit numbers by place value 2. Use greater than less than and equal language 3. Order sets of numbers within 100 4. Locate and estimate numbers on a number line	Develop numbers to 100: comparison and order through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 100: place value; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	3	23	Number & Algebra	NA-WN	—	Develop / Apply	MOE Core	4	Number sequences within 100	1. Count forward and backward by 1 2 5 and 10 2. Describe a number-sequence rule 3. Find missing terms in a sequence 4. Identify an incorrect term	Develop number sequences within 100 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 100: comparison and order; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	4	24	Number & Algebra	NA-AS	NA-WN, PS-CHECK	Develop / Apply	MOE Core	4	Addition within 100 without renaming	1. Add tens and ones without renaming 2. Use place-value models for addition 3. Record addition vertically with aligned place values 4. Estimate a sum before calculating	Develop addition within 100 without renaming through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Number sequences within 100; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	5	25	Number & Algebra	NA-AS	NA-WN, PS-CHECK	Develop / Apply	MOE Core	4	Subtraction within 100 without renaming	1. Subtract tens and ones without renaming 2. Use place-value models for subtraction 3. Record subtraction vertically with aligned place values 4. Estimate a difference before calculating	Develop subtraction within 100 without renaming through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition within 100 without renaming; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	6	26	Number & Algebra	NA-AS	PS-REASON, PS-CHECK	Develop / Apply	MOE Core	4	Addition within 100 with renaming	1. Regroup ten ones as one ten 2. Use the standard addition algorithm 3. Explain renaming with place-value language 4. Check a sum by reversing the operation	Develop addition within 100 with renaming through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Subtraction within 100 without renaming; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	7	27	Number & Algebra	NA-AS	PS-REASON, PS-CHECK	Develop / Apply	MOE Core	4	Subtraction within 100 with renaming	1. Regroup one ten as ten ones 2. Use the standard subtraction algorithm 3. Explain renaming with place-value language 4. Check a difference using addition	Develop subtraction within 100 with renaming through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition within 100 with renaming; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	8	28	Number & Algebra	NA-AS	—	Develop / Apply	MOE Core	4	Mixed addition and subtraction within 100	1. Choose the correct operation from context 2. Solve one-step problems within 100 3. Find a missing number in an equation 4. Use estimation to detect unreasonable answers	Develop mixed addition and subtraction within 100 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Subtraction within 100 with renaming; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P1 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P1	3	9	29	Measurement & Geometry	MG-MEAS	—	Introduce	MOE Core	4	Length	1. Compare lengths directly and indirectly 2. Measure with non-standard units consistently 3. Measure and draw lengths in centimetres 4. Solve simple length comparison problems	Develop length through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mixed addition and subtraction within 100; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	3	10	30	Problem Solving & Mathematical Processes	PS-REASON	NA-WN, MG-MEAS, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	Term 3 mastery and problem solving	1. Retrieve place value and algorithms within 100 2. Solve mixed number and length problems 3. Explain a method clearly 4. Correct a common place-value error 5. Solve one challenge problem with more than one strategy	Develop term 3 mastery and problem solving through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Length; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P1	4	1	31	Number & Algebra	NA-MD	PS-COMM	Consolidate	MOE Core	4	Multiplication as equal groups	1. Interpret multiplication as equal groups 2. Use repeated addition to represent groups 3. Use × and = correctly 4. Write multiplication sentences from arrays and stories	Develop multiplication as equal groups through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 3 mastery and problem solving; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	2	32	Number & Algebra	NA-MD	NA-FR	Consolidate	MOE Core	4	Division as sharing and grouping	1. Interpret division as equal sharing 2. Interpret division as grouping 3. Write division stories and number sentences 4. Recognise when equal sharing is not possible	Develop division as sharing and grouping through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplication as equal groups; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	3	33	Number & Algebra	NA-MD	PS-CHECK	Consolidate	MOE Core	4	Multiplication and division relationship	1. Link multiplication and division facts 2. Build simple fact families 3. Find an unknown group size or number of groups 4. Check division using multiplication	Develop multiplication and division relationship through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Division as sharing and grouping; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	4	34	Number & Algebra	NA-MD	NA-WN, NA-ALG	Consolidate	MOE Core	4	Multiplying within 40	1. Use skip counting and arrays 2. Apply 2 5 and 10 patterns informally 3. Use doubling for selected facts 4. Solve one-step multiplication problems	Develop multiplying within 40 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplication and division relationship; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	5	35	Number & Algebra	NA-MD	—	Consolidate	MOE Core	4	Dividing within 20	1. Divide quantities into equal groups 2. Use known multiplication facts to divide 3. Solve sharing and grouping problems 4. Interpret a simple remainder in context as an extension	Develop dividing within 20 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplying within 40; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	6	36	Measurement & Geometry	MG-MEAS	—	Consolidate	MOE Core	4	Time	1. Read time to the hour 2. Read time to the half-hour 3. Sequence daily events 4. Find simple durations in whole hours	Develop time through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Dividing within 20; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	7	37	Measurement & Geometry	MG-MEAS	—	Consolidate	MOE Core	4	Money	1. Recognise Singapore coins and notes 2. Count cents to \$1 and dollars to \$100 3. Make the same amount in different ways 4. Solve simple buying and change problems	Develop money through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Time; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	8	38	Measurement & Geometry	NA-FR	MG-GEO	Consolidate	Readiness Bridge	4	Equal sharing and spatial reasoning foundations	1. Share objects into equal groups 2. Recognise equal and unequal parts without formal fraction notation 3. Identify one half of a simple shape or small set informally 4. Build and describe simple 2D and 3D arrangements	Develop equal sharing and spatial reasoning foundations through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Money; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P1	4	9	39	Problem Solving & Mathematical Processes	PS-REASON	NA-MD, PS-MODEL	Consolidate	Spiral Maintenance / Transfer	4	Integrated mathematical problem solving	1. Choose between addition subtraction multiplication and division 2. Use a drawing table or bar model 3. Solve a two-part problem with scaffolded steps 4. Explain why an answer is reasonable	Develop integrated mathematical problem solving through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Equal sharing and spatial reasoning foundations; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P1	4	10	40	Problem Solving & Mathematical Processes	PS-REASON	NA-AS, ST-DATA, NA-MD, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	P1 year-end mastery and P2 readiness	1. Master core number facts within 20 2. Apply addition and subtraction within 100 3. Interpret simple graphs measurement time and money 4. Use multiplication and division concepts 5. Communicate and check a complete solution	Develop p1 year-end mastery and p2 readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Integrated mathematical problem solving; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking

P2 Mathematics - Complete 40-Week Knowledge Point Plan

MOE core, deliberate spiral maintenance and clearly labelled age-appropriate extension. Every atomic KP is family-tagged.

Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P2	1	1	1	Number & Algebra	NA-WN	PS-COMM	Develop	MOE Core	4	Numbers to 1000: place value	1. Count in tens and hundreds 2. Represent numbers with hundreds tens and ones 3. Read and write numbers to 1000 4. State digit values and expanded form	Develop numbers to 1000: place value through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve high-value P1 prerequisites	Concept recognition, procedural accuracy, application and explanation
P2	1	2	2	Number & Algebra	NA-WN	MG-GEO	Develop	MOE Core	4	Numbers to 1000: comparison and patterns	1. Compare and order 3-digit numbers 2. Locate numbers on an open number line 3. Continue sequences in ones tens and hundreds 4. Identify odd and even numbers	Develop numbers to 1000: comparison and patterns through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 1000: place value; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	1	3	3	Number & Algebra	NA-AS	NA-WN, PS-CHECK	Develop	MOE Core	4	Addition within 1000	1. Add up to three digits using the standard algorithm 2. Rename across one or more place values 3. Estimate sums using compatible numbers 4. Check addition using subtraction	Develop addition within 1000 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 1000: comparison and patterns; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	1	4	4	Number & Algebra	NA-AS	NA-WN, PS-CHECK	Develop	MOE Core	4	Subtraction within 1000	1. Subtract up to three digits using the standard algorithm 2. Rename across one or more place values 3. Estimate differences 4. Check subtraction using addition	Develop subtraction within 1000 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition within 1000; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	1	5	5	Number & Algebra	NA-AS	NA-WN	Develop	MOE Core	4	Mental addition and subtraction	1. Add and subtract ones tens or hundreds mentally 2. Bridge through multiples of 10 or 100 3. Use compensation and partitioning 4. Compare the efficiency of two strategies	Develop mental addition and subtraction through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Subtraction within 1000; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	1	6	6	Problem Solving & Mathematical Processes	NA-AS	PS-MODEL, PS-COMM	Develop	MOE Core	4	Addition and subtraction word problems	1. Solve one-step and two-part problems 2. Use part-whole and comparison models 3. Identify unnecessary information 4. Write statements with correct units	Develop addition and subtraction word problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mental addition and subtraction; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	1	7	7	Measurement & Geometry	MG-MEAS	—	Develop	MOE Core	4	Length in centimetres and metres	1. Measure and draw in centimetres 2. Measure and compare in metres 3. Choose an appropriate unit 4. Solve addition and subtraction length problems	Develop length in centimetres and metres through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition and subtraction word problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	1	8	8	Number & Algebra	NA-MD	PS-COMM	Develop	MOE Core	4	Multiplication and division concepts	1. Represent equal groups arrays and repeated addition 2. Represent sharing and grouping division 3. Relate multiplication and division 4. Write fact families	Develop multiplication and division concepts through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Length in centimetres and metres; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	1	9	9	Number & Algebra	NA-MD	NA-ALG	Develop	MOE Core	4	Tables of 2 5 and 10	1. Recall multiplication facts for 2 5 and 10 2. Apply corresponding division facts 3. Use patterns to derive unknown facts 4. Solve equal-group problems	Develop tables of 2 5 and 10 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplication and division concepts; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	1	10	10	Problem Solving & Mathematical Processes	PS-REASON	NA-WN, MG-MEAS, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	Term 1 mastery and reasoning	1. Retrieve place value and operations to 1000 2. Solve a two-step additive problem 3. Apply length measurement 4. Use table facts in context 5. Explain and verify one solution	Develop term 1 mastery and reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Tables of 2 5 and 10; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	2	1	11	Measurement & Geometry	MG-MEAS	—	Develop	MOE Core	4	Mass	1. Compare mass directly and indirectly 2. Measure mass in kilograms and grams 3. Choose an appropriate mass unit 4. Solve simple mass problems	Develop mass through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 1 mastery and reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	2	2	12	Measurement & Geometry	MG-MEAS	—	Develop	MOE Core	4	Time to five minutes	1. Read and write time to five minutes 2. Use a.m. and p.m. in familiar contexts 3. Relate hours and minutes 4. Find simple elapsed time	Develop time to five minutes through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mass; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	2	3	13	Number & Algebra	NA-MD	MG-MEAS	Develop	MOE Core	4	Tables of 3 and 4	1. Recall multiplication facts for 3 and 4 2. Apply corresponding division facts 3. Use doubling to derive 4-times facts 4. Solve contextual multiplication and division	Develop tables of 3 and 4 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Time to five minutes; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	2	4	14	Number & Algebra	NA-MD	NA-WN, PS-MODEL, PS-CHECK	Develop	MOE Core	4	Mixed multiplication and division	1. Select multiplication or division from context 2. Find missing factors or quotients 3. Use bar models for equal-group problems 4. Check division with multiplication	Develop mixed multiplication and division through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Tables of 3 and 4; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P2 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P2	2	5	15	Measurement & Geometry	MG-MEAS	NA-DEC	Develop	MOE Core	4	Money in dollars and cents	1. Count mixed coins and notes 2. Read and write decimal money notation 3. Compare money amounts 4. Convert between cents and dollar notation	Develop money in dollars and cents through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mixed multiplication and division; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	2	6	16	Problem Solving & Mathematical Processes	MG-MEAS	PS-CHECK	Develop	MOE Core	4	Money problems	1. Add and subtract money 2. Find change 3. Solve two-part purchase problems 4. Check whether an amount is sufficient	Develop money problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Money in dollars and cents; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	2	7	17	Number & Algebra	NA-FR	PS-COMM	Introduce	MOE Core	4	Fractions as part of a whole	1. Identify equal parts of a whole 2. Read and write fraction notation 3. Identify numerator and denominator informally 4. Represent unit and non-unit fractions	Develop fractions as part of a whole through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Money problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	2	8	18	Number & Algebra	NA-FR	PS-REASON	Develop	MOE Core	4	Comparing and ordering fractions	1. Compare unit fractions 2. Compare like fractions 3. Order fractions with common denominators 4. Justify comparison using models	Develop comparing and ordering fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fractions as part of a whole; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	2	9	19	Number & Algebra	NA-FR	PS-REASON	Develop	MOE Core	4	Adding and subtracting like fractions	1. Add like fractions within one whole 2. Subtract like fractions within one whole 3. Use visual models to explain operations 4. Solve simple fraction stories	Develop adding and subtracting like fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Comparing and ordering fractions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	2	10	20	Problem Solving & Mathematical Processes	PS-REASON	NA-MD, MG-MEAS, NA-FR, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	Term 2 mastery and transfer	1. Retrieve tables 2 3 4 5 and 10 2. Apply money mass and time 3. Compare and operate on simple fractions 4. Solve mixed two-step problems 5. Use inverse operations to check	Develop term 2 mastery and transfer through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Adding and subtracting like fractions; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	3	1	21	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	4	Volume and capacity	1. Compare capacity directly and indirectly 2. Measure volume in litres 3. Read simple scales 4. Solve addition and subtraction volume problems	Develop volume and capacity through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 2 mastery and transfer; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	3	2	22	Statistics	ST-DATA	—	Develop / Apply	MOE Core	4	Picture graphs with scales	1. Read picture graphs with one-to-one and simple scales 2. Interpret legends accurately 3. Find totals and differences 4. Complete a graph from a data table	Develop picture graphs with scales through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Volume and capacity; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P2	3	3	23	Statistics	ST-DATA	NA-MD, PS-REASON	Develop / Apply	MOE Core	4	Data interpretation	1. Ask multi-part questions from picture graphs 2. Compare categories using multiplication or addition 3. Identify supported and unsupported claims 4. Explain a simple trend or pattern	Develop data interpretation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Picture graphs with scales; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P2	3	4	24	Measurement & Geometry	MG-GEO	—	Develop / Apply	MOE Core	5	2D shapes and properties	1. Identify triangles quadrilaterals circles semicircles and quarter circles 2. Describe sides and corners 3. Sort shapes using two properties 4. Compose shapes using semicircles and quarter circles 5. Decompose compound shapes into familiar parts	Develop 2d shapes and properties through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data interpretation; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	3	5	25	Measurement & Geometry	MG-GEO	—	Develop / Apply	MOE Core	4	3D objects and spatial visualisation	1. Identify cube cuboid cone cylinder sphere and pyramid 2. Describe faces edges and vertices informally 3. Match objects to simple views 4. Build and describe simple structures	Develop 3d objects and spatial visualisation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: 2D shapes and properties; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	3	6	26	Number & Algebra	NA-AS	PS-CHECK	Consolidate	Spiral Maintenance / Transfer	4	Addition and subtraction consolidation	1. Solve mixed calculations within 1000 2. Find missing numbers in equations 3. Use estimation before exact calculation 4. Analyse and correct algorithm errors	Develop addition and subtraction consolidation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: 3D objects and spatial visualisation; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	3	7	27	Number & Algebra	NA-MD	—	Consolidate	Spiral Maintenance / Transfer	4	Multiplication and division consolidation	1. Retrieve all P2 multiplication tables 2. Use multiplication and division fact families 3. Solve mixed equal-group problems 4. Interpret simple remainders as an extension	Develop multiplication and division consolidation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition and subtraction consolidation; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	3	8	28	Problem Solving & Mathematical Processes	PS-REASON	PS-MODEL, PS-CHECK	Develop / Apply	MOE Core	4	Two-step word problems	1. Identify two linked operations 2. Use bar models to organise information 3. Solve additive and multiplicative combinations 4. Check each stage of a solution	Develop two-step word problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplication and division consolidation; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking

P2 Mathematics - Complete 40-Week Knowledge Point Plan

MOE core, deliberate spiral maintenance and clearly labelled age-appropriate extension. Every atomic KP is family-tagged.

Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P2	3	9	29	Number & Algebra	NA-ALG	—	Develop / Apply	MOE Core	4	Patterns and early functional thinking	1. Describe growing number patterns 2. Find missing terms using a rule 3. Relate input and output in a simple table 4. Create a pattern satisfying two conditions	Develop patterns and early functional thinking through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Two-step word problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	3	10	30	Problem Solving & Mathematical Processes	PS-REASON	NA-FR, PS-HEUR, PS-CHECK	Master / Transfer	Advanced Bridge / Extension	5	Term 3 mastery and challenge	1. Integrate number measurement fractions and data 2. Solve a non-routine classification problem 3. Compare two valid methods 4. Explain an error and improve the solution 5. Complete a timed mixed-fluency check	Develop term 3 mastery and challenge through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Patterns and early functional thinking; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	4	1	31	Number & Algebra	PS-REASON	MG-GEO	Extend	Advanced Bridge / Extension	4	Advanced place-value applications	1. Find numbers from digit clues 2. Form greatest and least numbers under conditions 3. Reason about 1 10 or 100 more or less 4. Solve number-line estimation problems	Develop advanced place-value applications through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 3 mastery and challenge; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	4	2	32	Problem Solving & Mathematical Processes	PS-REASON	PS-MODEL	Extend	Advanced Bridge / Extension	4	Advanced additive reasoning	1. Solve comparison problems with an unknown start 2. Solve two-step change problems 3. Use working backward in simple contexts 4. Write an equation from a bar model	Develop advanced additive reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced place-value applications; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	4	3	33	Problem Solving & Mathematical Processes	PS-REASON	—	Extend	Advanced Bridge / Extension	4	Advanced multiplicative reasoning	1. Solve grouping problems with an unknown number of groups 2. Solve sharing problems with an unknown group size 3. Compare additive and multiplicative situations 4. Create a word problem for a given equation	Develop advanced multiplicative reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced additive reasoning; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	4	4	34	Measurement & Geometry	MG-MEAS	—	Consolidate	MOE Core	4	Measurement integration	1. Choose among cm m g kg and litres 2. Convert simple familiar measures without formal algorithms 3. Compare measurements in context 4. Solve two-step measurement problems	Develop measurement integration through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced multiplicative reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	4	5	35	Measurement & Geometry	MG-MEAS	—	Consolidate	MOE Core	4	Time and money integration	1. Read schedules with familiar times 2. Find simple duration across an hour 3. Plan purchases within a budget 4. Solve change and time problems	Develop time and money integration through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Measurement integration; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	4	6	36	Number & Algebra	NA-FR	PS-REASON	Consolidate	MOE Core	4	Fraction reasoning extension	1. Find a fraction of a small set using objects 2. Recognise equivalent halves and quarters visually 3. Complete one whole with like fractions 4. Explain why unequal parts are not fractions of a whole	Develop fraction reasoning extension through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Time and money integration; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P2	4	7	37	Statistics	ST-DATA	PS-COMM	Consolidate	MOE Core	4	Data investigation	1. Collect categorical data 2. Organise data in a tally table 3. Represent data in a picture graph 4. State a conclusion supported by the data	Develop data investigation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fraction reasoning extension; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P2	4	8	38	Problem Solving & Mathematical Processes	PS-MODEL	PS-COMM, PS-CHECK	Consolidate	MOE Core	4	Mixed-model problem solving	1. Choose part-whole comparison or equal-group models 2. Represent a two-step problem 3. Identify a hidden question 4. Check using a different method	Develop mixed-model problem solving through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data investigation; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	4	9	39	Problem Solving & Mathematical Processes	PS-REASON	ST-DATA	Master / Transfer	Spiral Maintenance / Transfer	4	P2 cumulative assessment preparation	1. Retrieve all core arithmetic facts 2. Apply all measurement and data skills 3. Solve multi-topic two-step problems 4. Interpret mathematical language precisely	Develop p2 cumulative assessment preparation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mixed-model problem solving; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P2	4	10	40	Problem Solving & Mathematical Processes	PS-REASON	NA-MD, NA-FR, ST-DATA, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	P2 year-end mastery and P3 readiness	1. Master whole numbers to 1000 2. Master addition subtraction and core tables 3. Apply fractions money time mass length and volume 4. Interpret picture graphs and shapes 5. Reason communicate and verify independently	Develop p2 year-end mastery and p3 readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: P2 cumulative assessment preparation; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking

P3 Mathematics - Complete 40-Week Knowledge Point Plan

MOE core, deliberate spiral maintenance and clearly labelled age-appropriate extension. Every atomic KP is family-tagged.

Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P3	1	1	1	Number & Algebra	NA-WN	PS-COMM	Develop	MOE Core	4	Numbers to 10 000	1. Count in hundreds and thousands 2. Represent four-digit place value 3. Read and write numerals and number words 4. Compare and order numbers	Develop numbers to 10 000 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve high-value P2 prerequisites	Concept recognition, procedural accuracy, application and explanation
P3	1	2	2	Number & Algebra	NA-WN	PS-CHECK, PS-REASON	Develop	MOE Core	4	Number patterns and estimation	1. Continue sequences with varying steps 2. Find 1 10 100 or 1000 more or less 3. Estimate positions on number lines 4. Use place value to justify comparisons	Develop number patterns and estimation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 10 000; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	3	3	Number & Algebra	NA-AS	NA-WN, PS-CHECK	Develop	MOE Core	4	Addition to 10 000	1. Use the addition algorithm up to four digits 2. Rename across multiple places 3. Estimate sums 4. Check using subtraction	Develop addition to 10 000 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Number patterns and estimation; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	4	4	Number & Algebra	NA-AS	NA-WN, PS-CHECK	Develop	MOE Core	4	Subtraction to 10 000	1. Use the subtraction algorithm up to four digits 2. Rename across multiple places 3. Estimate differences 4. Check using addition	Develop subtraction to 10 000 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Addition to 10 000; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	5	5	Number & Algebra	NA-AS	PS-REASON	Develop	MOE Core	4	Mental calculation	1. Add two 2-digit numbers mentally 2. Subtract two 2-digit numbers mentally 3. Use compensation bridging and partitioning 4. Explain strategy efficiency	Develop mental calculation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Subtraction to 10 000; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	6	6	Number & Algebra	NA-MD	NA-ALG	Develop	MOE Core	4	Tables of 6 7 8 and 9	1. Recall multiplication facts for 6 7 8 and 9 2. Apply corresponding division facts 3. Use known facts to derive unknown facts 4. Identify patterns across tables	Develop tables of 6 7 8 and 9 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mental calculation; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	7	7	Number & Algebra	NA-MD	PS-CHECK	Develop	MOE Core	4	Multiplication algorithms	1. Multiply up to three digits by one digit 2. Estimate products 3. Interpret place-value partial products 4. Check using division or approximation	Develop multiplication algorithms through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Tables of 6 7 8 and 9; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	8	8	Number & Algebra	NA-MD	PS-CHECK	Develop	MOE Core	4	Division algorithms and remainder	1. Divide up to three digits by one digit 2. Interpret quotient and remainder 3. Estimate quotients 4. Check using multiplication plus remainder	Develop division algorithms and remainder through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplication algorithms; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	9	9	Measurement & Geometry	MG-MEAS	NA-DEC	Develop	MOE Core	4	Money operations	1. Add and subtract money in decimal notation 2. Find change from larger amounts 3. Compare purchase options 4. Solve two-step money problems	Develop money operations through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Division algorithms and remainder; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	1	10	10	Problem Solving & Mathematical Processes	PS-REASON	NA-MD, NA-WN, MG-MEAS, PS-CHECK, PS-HEUR	Master / Transfer	Spiral Maintenance / Transfer	5	Term 1 mastery and transfer	1. Retrieve four operations and tables 2. Solve two-step whole-number problems 3. Apply money accurately 4. Explain estimation and checking 5. Solve one non-routine number challenge	Develop term 1 mastery and transfer through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Money operations; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	2	1	11	Problem Solving & Mathematical Processes	NA-AS	PS-MODEL	Develop	MOE Core	4	Word problems: addition and subtraction	1. Solve up to two-step additive problems 2. Use part-whole and comparison bar models 3. Handle an unknown start or change 4. Identify redundant information	Develop word problems: addition and subtraction through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 1 mastery and transfer; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	2	2	12	Problem Solving & Mathematical Processes	NA-MD	PS-MODEL	Develop	MOE Core	4	Word problems: multiplication and division	1. Solve equal-group and comparison problems 2. Use unitary reasoning in simple contexts 3. Interpret remainders appropriately 4. Write equations from bar models	Develop word problems: multiplication and division through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Word problems: addition and subtraction; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	2	3	13	Problem Solving & Mathematical Processes	NA-AS	PS-MODEL, PS-CHECK	Develop	MOE Core	4	Four-operation problem solving	1. Select operations in mixed contexts 2. Solve two-step and two-part problems 3. Use before-after and comparison models 4. Check intermediate and final answers	Develop four-operation problem solving through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Word problems: multiplication and division; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	2	4	14	Statistics	ST-DATA	—	Develop	MOE Core	4	Bar graphs	1. Read vertical and horizontal bar graphs 2. Interpret scales accurately 3. Find totals differences and combined categories 4. Complete a graph from data	Develop bar graphs through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Four-operation problem solving; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence

P3 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P3	2	5	15	Statistics	ST-DATA	PS-REASON	Develop	MOE Core	4	Data interpretation and claims	1. Answer multi-step questions from bar graphs 2. Compare data across categories 3. Identify statements supported by data 4. Explain one conclusion with evidence	Develop data interpretation and claims through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Bar graphs; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P3	2	6	16	Measurement & Geometry	MG-GEO	PS-CHECK	Develop	MOE Core	4	Angles	1. Recognise angles as turns 2. Compare angles with a right angle 3. Identify right angles 4. Estimate and classify simple angles informally	Develop angles through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data interpretation and claims; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	2	7	17	Measurement & Geometry	MG-GEO	—	Develop	MOE Core	4	Perpendicular and parallel lines	1. Identify perpendicular lines 2. Identify parallel lines 3. Relate lines to rectangles and squares 4. Draw and label examples on grids	Develop perpendicular and parallel lines through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Angles; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	2	8	18	Number & Algebra	NA-FR	PS-REASON	Develop	MOE Core	4	Equivalent fractions	1. Generate equivalent fractions using models 2. Simplify fractions 3. Find a missing numerator or denominator 4. Explain equivalence multiplicatively	Develop equivalent fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Perpendicular and parallel lines; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	2	9	19	Number & Algebra	NA-FR	PS-REASON	Develop	MOE Core	4	Comparing unlike fractions	1. Compare unlike fractions with denominators up to 12 2. Use equivalent fractions or benchmarks 3. Order unlike fractions 4. Justify comparisons visually and symbolically	Develop comparing unlike fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Equivalent fractions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	2	10	20	Problem Solving & Mathematical Processes	PS-REASON	NA-FR, ST-DATA, MG-GEO	Master / Transfer	Spiral Maintenance / Transfer	5	Term 2 mastery and reasoning	1. Retrieve four operations and fractions 2. Interpret bar graphs 3. Apply angle and line knowledge 4. Solve mixed two-step problems 5. Compare two solution methods	Develop term 2 mastery and reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Comparing unlike fractions; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	3	1	21	Number & Algebra	NA-FR	—	Develop / Apply	MOE Core	4	Adding and subtracting related fractions	1. Add related fractions within one whole 2. Subtract related fractions within one whole 3. Rename using equivalent fractions 4. Solve fraction word problems	Develop adding and subtracting related fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 2 mastery and reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	3	2	22	Number & Algebra	NA-FR	NA-MD	Develop / Apply	MOE Core	4	Fraction of a set extension	1. Find a unit fraction of a set 2. Find a non-unit fraction of a set 3. Use division then multiplication 4. Solve contextual fraction-of-set problems	Develop fraction of a set extension through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Adding and subtracting related fractions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	3	3	23	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	5	Length measurement and conversion	1. Convert between kilometres and metres 2. Convert between metres and centimetres 3. Measure and compare lengths 4. Read measurement scales accurately 5. Solve two-step length problems using a common unit	Develop length measurement and conversion through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fraction of a set extension; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	3	4	24	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	5	Mass measurement and conversion	1. Measure mass in kilograms and grams 2. Convert between kilograms and grams 3. Read mass scales accurately 4. Compare and combine masses using a common unit 5. Solve mass word problems	Develop mass measurement and conversion through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Length measurement and conversion; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	3	5	25	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	5	Capacity measurement and conversion	1. Measure capacity in litres and millilitres 2. Convert between litres and millilitres 3. Read liquid-volume scales accurately 4. Compare and combine capacities using a common unit 5. Solve capacity word problems	Develop capacity measurement and conversion through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mass measurement and conversion; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	3	6	26	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	4	Area and perimeter concepts	1. Distinguish area from perimeter 2. Find area by counting square units 3. Find perimeter by adding side lengths 4. Solve missing-side problems on grids	Develop area and perimeter concepts through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Capacity measurement and conversion; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	3	7	27	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	4	Area and perimeter of rectangles and squares	1. Use formulas for rectangle and square area 2. Use formulas for perimeter 3. Find a missing dimension 4. Solve composite grid problems as extension	Develop area and perimeter of rectangles and squares through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Area and perimeter concepts; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	3	8	28	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	5	Time to the minute and duration	1. Tell and write time to the minute using past and to 2. Convert hours and minutes to minutes and vice versa 3. Find starting time finishing time or duration 4. Read 12-hour and 24-hour time in familiar contexts 5. Interpret timetables and solve time problems	Develop time to the minute and duration through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Area and perimeter of rectangles and squares; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P3 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P3	3	9	29	Problem Solving & Mathematical Processes	MG-MEAS	PS-MODEL, PS-CHECK	Develop / Apply	MOE Core	4	Measurement problem solving	1. Choose correct units and operations 2. Solve two-step length mass volume or time problems 3. Draw a bar model or timeline 4. Check unit consistency	Develop measurement problem solving through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Time to the minute and duration; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	3	10	30	Problem Solving & Mathematical Processes	PS-REASON	NA-FR, MG-MEAS, PS-HEUR	Master / Transfer	Spiral Maintenance / Transfer	5	Term 3 mastery and application	1. Integrate fractions and measurement 2. Solve an area-perimeter challenge 3. Interpret a timetable 4. Explain a unit-conversion strategy 5. Complete a mixed non-routine task	Develop term 3 mastery and application through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Measurement problem solving; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	4	1	31	Number & Algebra	PS-REASON	—	Extend	Advanced Bridge / Extension	4	Advanced number sense	1. Form numbers under digit constraints 2. Round informally for estimation 3. Find bounds for a reasonable answer 4. Detect impossible numerical claims	Develop advanced number sense through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 3 mastery and application; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	4	2	32	Number & Algebra	PS-REASON	PS-CHECK, NA-ALG	Extend	Advanced Bridge / Extension	4	Advanced operation reasoning	1. Use order implied by a multi-step context 2. Find missing digits in algorithms 3. Use inverse operations in equations 4. Generalise a calculation pattern	Develop advanced operation reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced number sense; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	4	3	33	Number & Algebra	NA-FR	NA-WN, PS-REASON	Extend	Advanced Bridge / Extension	4	Advanced fraction reasoning	1. Use 0 one-half and 1 as benchmarks 2. Compare fractions with close values 3. Find multiple equivalent forms 4. Explain a common fraction misconception	Develop advanced fraction reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced operation reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	4	4	34	Measurement & Geometry	MG-GEO	—	Consolidate	MOE Core	4	Geometry and spatial reasoning	1. Identify symmetry in familiar shapes 2. Visualise simple turns and positions 3. Compose shapes to meet constraints 4. Reason from incomplete diagrams	Develop geometry and spatial reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced fraction reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P3	4	5	35	Statistics	ST-DATA	—	Consolidate	MOE Core	4	Data investigation	1. Collect and categorise data 2. Select a suitable bar-graph scale 3. Construct an accurate bar graph 4. Write an evidence-based conclusion	Develop data investigation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Geometry and spatial reasoning; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P3	4	6	36	Problem Solving & Mathematical Processes	PS-MODEL	PS-COMM	Master / Transfer	Spiral Maintenance / Transfer	4	Model method mastery	1. Choose part-whole comparison or equal-group models 2. Represent two-step relationships 3. Label bars and units precisely 4. Translate a model into equations	Develop model method mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data investigation; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	4	7	37	Problem Solving & Mathematical Processes	PS-HEUR	NA-ALG	Consolidate	MOE Core	4	Heuristics introduction	1. Make a systematic list 2. Guess check and improve 3. Work backward in a simple problem 4. Look for a pattern	Develop heuristics introduction through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Model method mastery; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	4	8	38	Problem Solving & Mathematical Processes	PS-REASON	PS-CHECK	Consolidate	Spiral Maintenance / Transfer	4	Integrated PSLE-style foundations	1. Solve multi-topic short-answer problems 2. Explain reasoning with mathematical language 3. Check through estimation or inverse operations 4. Compare an efficient and inefficient method	Develop integrated psle-style foundations through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Heuristics introduction; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	4	9	39	Problem Solving & Mathematical Processes	PS-REASON	MG-MEAS, PS-COMM	Master / Transfer	Spiral Maintenance / Transfer	4	P3 cumulative mastery	1. Retrieve all P3 number and geometry knowledge 2. Apply all measurement and statistics skills 3. Solve mixed two-step word problems 4. Correct representative misconceptions	Develop p3 cumulative mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Integrated PSLE-style foundations; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P3	4	10	40	Problem Solving & Mathematical Processes	PS-REASON	NA-AS, NA-FR, ST-DATA, PS-HEUR	Master / Transfer	Spiral Maintenance / Transfer	5	P3 year-end mastery and P4 readiness	1. Master whole numbers to 10 000 and four operations 2. Master core fraction relationships 3. Apply graphs angles lines area perimeter and measures 4. Use models heuristics and checking 5. Transfer learning to unfamiliar contexts	Develop p3 year-end mastery and p4 readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: P3 cumulative mastery; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking

P4 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P4	1	1	1	Number & Algebra	NA-WN	PS-COMM	Develop	MOE Core	4	Numbers to 100 000	1. Read and write numbers to 100 000 2. Represent place values to ten-thousands 3. Compare and order large numbers 4. Continue large-number sequences	Develop numbers to 100 000 through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve high-value P3 prerequisites	Concept recognition, procedural accuracy, application and explanation
P4	1	2	2	Number & Algebra	NA-WN	PS-CHECK	Develop	MOE Core	4	Rounding and estimation	1. Round to nearest 10 100 and 1000 2. Use $\approx$ correctly 3. Estimate sums differences products and quotients 4. Judge reasonableness using bounds	Develop rounding and estimation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 100 000; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	1	3	3	Number & Algebra	NA-WN	NA-ALG	Develop	MOE Core	4	Factors	1. List factor pairs systematically 2. Determine whether a 1-digit number is a factor 3. Find common factors 4. Use divisibility patterns as an advanced aid	Develop factors through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Rounding and estimation; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	1	4	4	Number & Algebra	NA-WN	—	Develop	MOE Core	4	Multiples	1. Generate multiples 2. Determine whether a number is a multiple 3. Find common multiples 4. Relate factors and multiples	Develop multiples through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Factors; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	1	5	5	Number & Algebra	NA-MD	PS-CHECK	Develop	MOE Core	4	Multiplication algorithms	1. Multiply up to four digits by one digit 2. Multiply up to three digits by two digits 3. Estimate products 4. Analyse partial products	Develop multiplication algorithms through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiples; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	1	6	6	Number & Algebra	NA-MD	PS-CHECK	Develop	MOE Core	4	Division algorithms	1. Divide up to four digits by one digit 2. Interpret remainders in context 3. Estimate quotients 4. Check with multiplication	Develop division algorithms through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplication algorithms; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	1	7	7	Problem Solving & Mathematical Processes	NA-AS	NA-WN, PS-MODEL, PS-CHECK	Develop	MOE Core	4	Four-operation word problems	1. Solve multi-step whole-number problems 2. Apply order from context 3. Use bar models and equations 4. Evaluate answer reasonableness	Develop four-operation word problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Division algorithms; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	1	8	8	Statistics	ST-DATA	—	Develop	MOE Core	4	Tables and line graphs	1. Read tables and line graphs 2. Interpret scales and intervals 3. Find changes and differences 4. Connect table values to plotted points	Develop tables and line graphs through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Four-operation word problems; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P4	1	9	9	Statistics	ST-DATA	NA-PROP	Develop	MOE Core	4	Data trends and misleading scales	1. Describe increase decrease and fluctuation 2. Compare rates of change informally 3. Identify unsupported claims 4. Recognise how a scale can affect visual impression	Develop data trends and misleading scales through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Tables and line graphs; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P4	1	10	10	Problem Solving & Mathematical Processes	PS-REASON	NA-WN, ST-DATA, PS-HEUR	Master / Transfer	Spiral Maintenance / Transfer	5	Term 1 mastery and transfer	1. Retrieve large numbers factors multiples and algorithms 2. Solve multi-step problems 3. Interpret tables and line graphs 4. Use estimation throughout 5. Complete one non-routine task	Develop term 1 mastery and transfer through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data trends and misleading scales; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	2	1	11	Number & Algebra	NA-FR	—	Develop	MOE Core	4	Mixed numbers and improper fractions	1. Relate mixed numbers and improper fractions 2. Convert between forms 3. Locate mixed numbers on number lines 4. Compare values greater than one	Develop mixed numbers and improper fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 1 mastery and transfer; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	2	12	Number & Algebra	NA-FR	PS-MODEL	Develop	MOE Core	4	Fraction of a set	1. Find a fraction of a set 2. Find the whole from a unit fraction in guided cases 3. Use bar models for fraction-of-set problems 4. Solve multi-step fraction contexts	Develop fraction of a set through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mixed numbers and improper fractions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	3	13	Number & Algebra	NA-FR	—	Develop	MOE Core	4	Adding and subtracting unlike fractions	1. Find common denominators within syllabus limits 2. Add unlike fractions 3. Subtract unlike fractions 4. Simplify final answers	Develop adding and subtracting unlike fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fraction of a set; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	4	14	Number & Algebra	NA-AS	NA-FR, PS-CHECK	Develop	MOE Core	4	Mixed-number addition and subtraction extension	1. Rename between wholes and fractions 2. Add mixed numbers in guided cases 3. Subtract mixed numbers in guided cases 4. Check using estimation	Develop mixed-number addition and subtraction extension through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Adding and subtracting unlike fractions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P4 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P4	2	5	15	Measurement & Geometry	MG-GEO	PS-CHECK	Develop	MOE Core	4	Angles in degrees	1. Measure angles with a protractor 2. Draw angles to a given measure 3. Classify acute right obtuse and reflex angles 4. Estimate before measuring	Develop angles in degrees through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Mixed-number addition and subtraction extension; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	6	16	Measurement & Geometry	MG-GEO	PS-REASON	Develop	MOE Core	4	Angles on a line and at a point	1. Use angles on a straight line 2. Use angles at a point 3. Find unknown angles 4. State reasons in simple angle work	Develop angles on a line and at a point through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Angles in degrees; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	7	17	Measurement & Geometry	MG-GEO	MG-MEAS	Develop	MOE Core	4	Rectangles and squares	1. Apply properties of rectangles and squares 2. Use perpendicular and parallel sides 3. Find unknown angles 4. Find missing lengths from perimeter	Develop rectangles and squares through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Angles on a line and at a point; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	8	18	Measurement & Geometry	MG-MEAS	MG-GEO	Develop	MOE Core	4	Area and perimeter	1. Find area and perimeter of rectangles and squares 2. Find missing dimensions 3. Solve composite rectilinear figures 4. Distinguish equal area from equal perimeter	Develop area and perimeter through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Rectangles and squares; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	9	19	Measurement & Geometry	MG-GEO	—	Develop	MOE Core	4	Symmetry	1. Identify lines of symmetry 2. Complete symmetric figures 3. Describe reflection on square grids 4. Reason about symmetry properties	Develop symmetry through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Area and perimeter; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	2	10	20	Problem Solving & Mathematical Processes	PS-REASON	NA-FR, MG-MEAS	Master / Transfer	Spiral Maintenance / Transfer	5	Term 2 mastery and reasoning	1. Retrieve fractions angles quadrilaterals and symmetry 2. Solve composite area-perimeter problems 3. Explain angle reasons 4. Use a model for a fraction problem 5. Correct misconceptions	Develop term 2 mastery and reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Symmetry; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	3	1	21	Number & Algebra	NA-DEC	PS-COMM	Introduce	MOE Core	4	Decimals to three places	1. Represent tenths hundredths and thousandths 2. Read and write decimals 3. Compare and order decimals 4. Locate decimals on number lines	Develop decimals to three places through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 2 mastery and reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	3	2	22	Number & Algebra	NA-FR	NA-DEC, PS-REASON	Develop / Apply	MOE Core	4	Fractions and decimals	1. Express decimals as fractions 2. Express eligible fractions as decimals 3. Use place value to explain equivalence 4. Compare values across forms	Develop fractions and decimals through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Decimals to three places; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	3	3	23	Number & Algebra	NA-DEC	—	Develop / Apply	MOE Core	4	Rounding decimals	1. Round to nearest whole number 2. Round to one decimal place 3. Round to two decimal places 4. Use rounded values for estimation	Develop rounding decimals through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fractions and decimals; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	3	4	24	Number & Algebra	NA-DEC	PS-CHECK	Develop / Apply	MOE Core	4	Adding and subtracting decimals	1. Align decimal place values 2. Add decimals up to two places 3. Subtract decimals up to two places 4. Estimate and check decimal answers	Develop adding and subtracting decimals through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Rounding decimals; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	3	5	25	Number & Algebra	NA-DEC	—	Develop / Apply	MOE Core	4	Multiplying and dividing decimals	1. Multiply decimals by a one-digit whole number 2. Divide decimals by a one-digit whole number 3. Interpret decimal quotients 4. Round answers to specified accuracy	Develop multiplying and dividing decimals through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Adding and subtracting decimals; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	3	6	26	Number & Algebra	NA-DEC	PS-CHECK, MG-MEAS	Develop / Apply	MOE Core	4	Division with decimal quotient	1. Divide whole numbers to obtain decimal quotients 2. Use place-value continuation 3. Check with multiplication 4. Interpret quotients in measurement contexts	Develop division with decimal quotient through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplying and dividing decimals; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	3	7	27	Statistics	ST-DATA	NA-FR	Extend	Advanced Bridge / Extension	4	Pie charts introduction (advanced)	1. Recognise a pie chart as parts of a whole 2. Relate halves quarters and simple fractions to sectors 3. Read values from a labelled pie chart 4. Compare categories using sector size	Develop pie charts introduction (advanced) through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Division with decimal quotient; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P4	3	8	28	Measurement & Geometry	MG-GEO	—	Develop / Apply	MOE Core	4	Nets of solids	1. Recognise nets of cubes and cuboids 2. Match nets to solids 3. Identify opposite and adjacent faces 4. Complete a missing part of a net	Develop nets of solids through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Pie charts introduction (advanced); cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P4 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P4	3	9	29	Measurement & Geometry	MG-GEO	—	Develop / Apply	MOE Core	4	Spatial visualisation	1. Identify front side and top views 2. Mentally fold simple nets 3. Count cubes in simple structures 4. Infer hidden cubes in supported diagrams	Develop spatial visualisation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Nets of solids; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	3	10	30	Problem Solving & Mathematical Processes	PS-REASON	NA-DEC	Master / Transfer	Spiral Maintenance / Transfer	5	Term 3 mastery and application	1. Integrate decimals data and nets 2. Solve decimal word problems 3. Interpret a simple pie chart 4. Explain a spatial argument 5. Complete a multi-topic challenge	Develop term 3 mastery and application through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Spatial visualisation; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	4	1	31	Number & Algebra	NA-FR	NA-MD, PS-CHECK	Consolidate	Spiral Maintenance / Transfer	5	Four operations of whole numbers and fraction retrieval	1. Add and subtract numbers to 100 000 accurately 2. Multiply and divide within P4 syllabus limits 3. Select operations in multi-step contexts 4. Use factors to simplify fractions 5. Estimate and verify numerical answers	Develop four operations of whole numbers and fraction retrieval through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 3 mastery and application; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	4	2	32	Problem Solving & Mathematical Processes	NA-DEC	PS-CHECK	Consolidate	MOE Core	4	Decimal applications	1. Solve money and measurement decimal problems 2. Handle multi-step decimal contexts 3. Select a sensible degree of accuracy 4. Check through inverse operations	Develop decimal applications through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Four operations of whole numbers and fraction retrieval; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	4	3	33	Measurement & Geometry	MG-MEAS	MG-GEO	Extend	Advanced Bridge / Extension	4	Composite area and perimeter challenge	1. Decompose rectilinear composite figures 2. Find missing side lengths 3. Use area subtraction 4. Compare alternative decompositions	Develop composite area and perimeter challenge through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Decimal applications; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	4	4	34	Measurement & Geometry	PS-REASON	MG-GEO	Extend	Advanced Bridge / Extension	4	Geometry reasoning challenge	1. Use multiple angle facts in one figure 2. Infer properties from markings 3. Distinguish necessary from visual information 4. Explain each step with a reason	Develop geometry reasoning challenge through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Composite area and perimeter challenge; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P4	4	5	35	Statistics	ST-DATA	—	Consolidate	MOE Core	4	Data investigation	1. Collect paired data over time 2. Choose table or line graph 3. Construct a line graph 4. State trends and limitations	Develop data investigation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Geometry reasoning challenge; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P4	4	6	36	Problem Solving & Mathematical Processes	PS-MODEL	NA-FR, NA-WN	Consolidate	MOE Core	4	Model method and units	1. Model multiplicative comparison 2. Model fraction-of-set situations 3. Track units across multiple steps 4. Translate models into equations	Develop model method and units through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data investigation; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	4	7	37	Problem Solving & Mathematical Processes	PS-HEUR	—	Consolidate	MOE Core	4	Heuristics development	1. Make a systematic table 2. Use guess check and improve 3. Work backward from a final state 4. Use before-after relationships	Develop heuristics development through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Model method and units; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	4	8	38	Problem Solving & Mathematical Processes	PS-REASON	NA-DEC, ST-DATA	Master / Transfer	Spiral Maintenance / Transfer	4	Integrated assessment practice	1. Solve short and structured problems 2. Combine whole numbers fractions decimals and geometry 3. Interpret visual and data information 4. Review errors by knowledge point	Develop integrated assessment practice through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Heuristics development; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	4	9	39	Problem Solving & Mathematical Processes	PS-REASON	PS-COMM, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	4	P4 cumulative mastery	1. Retrieve all P4 content independently 2. Solve advanced multi-step problems 3. Select efficient representations 4. Verify exact and estimated answers	Develop p4 cumulative mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Integrated assessment practice; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P4	4	10	40	Problem Solving & Mathematical Processes	PS-REASON	NA-WN, NA-DEC, ST-DATA, PS-HEUR	Master / Transfer	Spiral Maintenance / Transfer	5	P4 year-end mastery and P5 readiness	1. Master numbers to 100 000 factors multiples and operations 2. Master fractions and decimals 3. Apply angles area perimeter symmetry nets and data 4. Use multi-step models and heuristics 5. Transfer to unfamiliar problems	Develop p4 year-end mastery and p5 readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: P4 cumulative mastery; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking

P5 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P5	1	1	1	Number & Algebra	NA-WN	—	Develop	MOE Core	4	Numbers to 10 million	1. Read and write numbers to 10 million 2. Interpret place value to millions 3. Compare and order large numbers 4. Solve digit-constraint problems	Develop numbers to 10 million through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve high-value P4 prerequisites	Concept recognition, procedural accuracy, application and explanation
P5	1	2	2	Number & Algebra	NA-MD	NA-WN, PS-REASON	Develop	MOE Core	4	Multiplying and dividing by powers of ten	1. Multiply whole numbers by 10 100 and 1000 2. Divide whole numbers by 10 100 and 1000 3. Extend to their multiples 4. Explain place-value shifts without adding zeros mechanically	Develop multiplying and dividing by powers of ten through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Numbers to 10 million; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	1	3	3	Number & Algebra	NA-AS	NA-MD, PS-CHECK	Develop	MOE Core	5	Four operations and order of operations	1. Consolidate addition subtraction multiplication and division of whole numbers 2. Apply multiplication and division before addition and subtraction 3. Use brackets correctly 4. Evaluate multi-operation expressions	Develop four operations and order of operations through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplying and dividing by powers of ten; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	1	4	4	Number & Algebra	NA-FR	NA-WN, NA-DEC	Develop	MOE Core	4	Fraction and division	1. Express whole-number division as a fraction 2. Express fractions as decimals 3. Interpret fraction as quotient 4. Locate quotient fractions on number lines	Develop fraction and division through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Four operations and order of operations; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	1	5	5	Number & Algebra	NA-FR	PS-CHECK	Develop	MOE Core	4	Adding and subtracting mixed numbers	1. Add mixed numbers 2. Subtract mixed numbers with renaming 3. Simplify answers 4. Estimate using benchmark fractions	Develop adding and subtracting mixed numbers through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fraction and division; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	1	6	6	Number & Algebra	NA-FR	—	Develop	MOE Core	4	Multiplying fractions by whole numbers	1. Multiply proper and improper fractions by whole numbers 2. Multiply mixed numbers by whole numbers 3. Use cancellation efficiently 4. Solve fraction-of-quantity problems	Develop multiplying fractions by whole numbers through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Adding and subtracting mixed numbers; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	1	7	7	Number & Algebra	NA-FR	—	Develop	MOE Core	4	Multiplying fractions	1. Multiply proper fractions 2. Multiply proper by improper fractions 3. Multiply two improper fractions 4. Interpret multiplication of fractions with models	Develop multiplying fractions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplying fractions by whole numbers; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	1	8	8	Problem Solving & Mathematical Processes	NA-FR	PS-MODEL, PS-CHECK	Develop	MOE Core	4	Fraction word problems	1. Solve multi-step fraction problems 2. Find a fraction of a remainder 3. Use bar models for successive parts 4. Check answers against the whole	Develop fraction word problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multiplying fractions; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	1	9	9	Measurement & Geometry	MG-MEAS	—	Develop	MOE Core	4	Area of triangle	1. Identify a base and corresponding perpendicular height 2. Derive and use triangle area formula 3. Find a missing base or height 4. Find composite areas with triangles	Develop area of triangle through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fraction word problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	1	10	10	Problem Solving & Mathematical Processes	PS-REASON	NA-FR, MG-MEAS	Master / Transfer	Spiral Maintenance / Transfer	5	Term 1 mastery and transfer	1. Retrieve large numbers operations and fractions 2. Apply triangle area 3. Solve multi-step fraction problems 4. Use estimation and cancellation 5. Complete one advanced challenge	Develop term 1 mastery and transfer through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Area of triangle; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	2	1	11	Measurement & Geometry	MG-MEAS	—	Develop	MOE Core	5	Volume of cube and cuboid	1. Use cubic centimetres and cubic metres correctly 2. Find volume of cubes cuboids and rectangular tanks 3. Use 1 millilitre = 1 cubic centimetre 4. Use 1 litre = 1000 cubic centimetres 5. Convert among litres millilitres and cubic centimetres in context	Develop volume of cube and cuboid through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 1 mastery and transfer; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	2	2	12	Measurement & Geometry	MG-MEAS	—	Develop	MOE Core	4	Volume applications	1. Find a missing dimension from volume 2. Compare volumes 3. Solve liquid-level problems in rectangular tanks 4. Use base area × height reasoning	Develop volume applications through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Volume of cube and cuboid; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	2	3	13	Number & Algebra	NA-DEC	NA-WN, PS-CHECK	Develop	MOE Core	5	Decimal operations and powers of ten	1. Add and subtract decimals accurately 2. Multiply and divide decimals within syllabus limits 3. Multiply and divide decimals by 10 100 and 1000 4. Extend powers-of-ten reasoning to their multiples 5. Estimate and verify decimal results	Develop decimal operations and powers of ten through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Volume applications; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	2	4	14	Measurement & Geometry	MG-MEAS	—	Develop	MOE Core	4	Measurement conversions in decimal form	1. Convert km and m 2. Convert m and cm 3. Convert kg and g 4. Convert L and mL	Develop measurement conversions in decimal form through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Decimal operations and powers of ten; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

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P5	2	5	15	Number & Algebra	NA-PROP	—	Introduce	MOE Core	4	Rate concepts	1. Interpret rate as amount per unit 2. Find rate 3. Find total amount 4. Find number of units	Develop rate concepts through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Measurement conversions in decimal form; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	2	6	16	Problem Solving & Mathematical Processes	NA-PROP	NA-MD	Develop	MOE Core	4	Rate word problems	1. Solve rate problems with proportional reasoning 2. Use tables and unitary method 3. Compare two rates 4. Track compound units accurately	Develop rate word problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Rate concepts; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	2	7	17	Number & Algebra	NA-PCT	NA-DEC, PS-CHECK	Introduce	MOE Core	4	Percentage meaning	1. Express part of a whole as a percentage 2. Use % correctly 3. Connect fractions decimals and percentages 4. Estimate common percentages	Develop percentage meaning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Rate word problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	2	8	18	Number & Algebra	NA-PCT	PS-CHECK	Develop	MOE Core	4	Percentage of a quantity	1. Find a percentage part of a whole 2. Use 1% 10% and benchmark strategies 3. Solve percentage word problems 4. Check percentage answers against the whole	Develop percentage of a quantity through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Percentage meaning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	2	9	19	Problem Solving & Mathematical Processes	NA-PCT	—	Develop	MOE Core	4	Financial percentage	1. Find discount 2. Find GST in syllabus contexts 3. Find simple annual interest 4. Compare final prices	Develop financial percentage through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Percentage of a quantity; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	2	10	20	Problem Solving & Mathematical Processes	PS-REASON	NA-DEC, NA-PROP	Master / Transfer	Spiral Maintenance / Transfer	5	Term 2 mastery and reasoning	1. Retrieve volume decimals rate and percentage 2. Solve unit-conversion problems 3. Compare rates and prices 4. Use fraction-decimal-percentage links 5. Explain solution efficiency	Develop term 2 mastery and reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Financial percentage; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	3	1	21	Measurement & Geometry	MG-GEO	PS-REASON	Develop / Apply	MOE Core	4	Angles and angle facts	1. Use angles on a line and at a point 2. Use vertically opposite angles 3. Find unknown angles in multi-step diagrams 4. State reasons accurately	Develop angles and angle facts through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 2 mastery and reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	3	2	22	Measurement & Geometry	MG-GEO	—	Develop / Apply	MOE Core	4	Properties of triangles	1. Classify triangles by sides and angles 2. Use isosceles triangle properties 3. Use equilateral triangle properties 4. Use angle sum of a triangle	Develop properties of triangles through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Angles and angle facts; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	3	3	23	Measurement & Geometry	MG-GEO	—	Develop / Apply	MOE Core	4	Unknown angles in triangles	1. Find missing triangle angles 2. Combine line point and triangle facts 3. Use exterior-angle reasoning as an extension 4. Distinguish marked facts from visual assumptions	Develop unknown angles in triangles through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Properties of triangles; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	3	4	24	Measurement & Geometry	PS-REASON	MG-GEO	Develop / Apply	MOE Core	4	Parallelogram rhombus and trapezium	1. Identify defining properties 2. Use parallel-side angle relationships in guided cases 3. Compare quadrilaterals 4. Find unknown angles using properties	Develop parallelogram rhombus and trapezium through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Unknown angles in triangles; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	3	5	25	Measurement & Geometry	PS-REASON	MG-GEO, MG-MEAS	Develop / Apply	MOE Core	4	Composite geometric figures	1. Combine triangle and quadrilateral properties 2. Find unknown angles without extra construction 3. Find missing lengths from perimeter 4. Explain a chain of geometric reasoning	Develop composite geometric figures through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Parallelogram rhombus and trapezium; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	3	6	26	Statistics	ST-DATA	PS-COMM	Consolidate	Spiral Maintenance / Transfer	4	Data representation retrieval	1. Interpret tables line graphs and pie charts 2. Compare multiple representations 3. Calculate totals and differences 4. Identify misleading or incomplete claims	Develop data representation retrieval through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Composite geometric figures; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P5	3	7	27	Statistics	ST-DATA	—	Extend	Advanced Bridge / Extension	4	Average introduction (advanced bridge)	1. Interpret average as equal sharing 2. Find a simple average 3. Find a total from average and number of items 4. Compare average with individual values	Develop average introduction (advanced bridge) through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data representation retrieval; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P5	3	8	28	Number & Algebra	NA-ALG	—	Develop / Apply	Advanced Bridge / Extension	4	Algebraic thinking bridge	1. Use a symbol or letter for an unknown 2. Translate simple verbal relationships 3. Evaluate a simple expression by substitution 4. Solve simple missing-value equations	Develop algebraic thinking bridge through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Average introduction (advanced bridge); cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P5 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P5	3	9	29	Problem Solving & Mathematical Processes	PS-MODEL	NA-FR	Develop / Apply	MOE Core	4	Multi-step model method	1. Model fractions percentages and rates 2. Use before-after bars 3. Identify a common unit 4. Write equations from models	Develop multi-step model method through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Algebraic thinking bridge; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	3	10	30	Problem Solving & Mathematical Processes	PS-REASON	NA-PCT	Master / Transfer	Spiral Maintenance / Transfer	5	Term 3 mastery and application	1. Integrate percentage rate geometry and data 2. Solve a three-step structured problem 3. Explain geometric reasons 4. Evaluate a simple expression 5. Review errors by KP	Develop term 3 mastery and application through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Multi-step model method; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	4	1	31	Number & Algebra	NA-FR	—	Extend	Advanced Bridge / Extension	4	Advanced fraction patterns	1. Use fraction products to compare quantities 2. Find missing factors in fraction equations 3. Reason about scaling by a fraction 4. Solve a fraction pattern problem	Develop advanced fraction patterns through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 3 mastery and application; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	4	2	32	Problem Solving & Mathematical Processes	NA-PCT	PS-MODEL	Extend	Advanced Bridge / Extension	4	Advanced percentage problems	1. Find original price in guided cases 2. Solve successive discount contexts as extension 3. Compare percentage and absolute change 4. Use before-after models	Develop advanced percentage problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced fraction patterns; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	4	3	33	Problem Solving & Mathematical Processes	MG-MEAS	NA-PROP	Extend	Advanced Bridge / Extension	4	Advanced rate and volume	1. Combine rate with volume 2. Solve filling and emptying situations without simultaneous rates 3. Convert units before applying rate 4. Judge whether a rate answer is realistic	Develop advanced rate and volume through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced percentage problems; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	4	4	34	Measurement & Geometry	PS-REASON	MG-GEO, MG-MEAS	Extend	Advanced Bridge / Extension	4	Advanced geometry	1. Solve multi-step unknown-angle problems 2. Use symmetry and quadrilateral properties 3. Find triangle areas in composite figures 4. Reason from partial diagrams	Develop advanced geometry through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced rate and volume; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P5	4	5	35	Statistics	ST-DATA	PS-COMM	Consolidate	MOE Core	4	Data investigation and average	1. Collect numerical data 2. Calculate and interpret average 3. Choose a suitable representation 4. State a conclusion and limitation	Develop data investigation and average through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced geometry; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P5	4	6	36	Problem Solving & Mathematical Processes	PS-HEUR	—	Consolidate	MOE Core	4	Heuristics for upper primary	1. Use working backward 2. Use before-after 3. Make an assumption in guided cases 4. Use a systematic table	Develop heuristics for upper primary through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data investigation and average; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	4	7	37	Problem Solving & Mathematical Processes	PS-HEUR	NA-DEC, MG-MEAS, PS-COMM	Consolidate	MOE Core	4	Non-routine multi-topic problems	1. Connect fractions decimals percentages and rate 2. Combine geometry and measurement 3. Interpret a diagram not drawn to scale 4. Present a logically sequenced solution	Develop non-routine multi-topic problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Heuristics for upper primary; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	4	8	38	Problem Solving & Mathematical Processes	PS-REASON	NA-WN, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	4	PSLE-format readiness I	1. Solve short-answer fluency items 2. Solve structured multi-step items 3. Manage units and rounding 4. Check answers strategically	Develop psle-format readiness i through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Non-routine multi-topic problems; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	4	9	39	Problem Solving & Mathematical Processes	PS-REASON	—	Master / Transfer	Spiral Maintenance / Transfer	4	P5 cumulative mastery	1. Retrieve all P5 content 2. Diagnose weak KPs 3. Redo errors with corrected reasoning 4. Solve a balanced advanced set	Develop p5 cumulative mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: PSLE-format readiness I; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P5	4	10	40	Problem Solving & Mathematical Processes	PS-REASON	NA-DEC, MG-MEAS, ST-DATA, PS-HEUR	Master / Transfer	Spiral Maintenance / Transfer	5	P5 year-end mastery and P6 readiness	1. Master fraction decimal percentage and rate relationships 2. Master volume triangle area and geometry properties 3. Use early algebra and average 4. Solve complex models and heuristics 5. Transfer to PSLE-style problems	Develop p5 year-end mastery and p6 readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: P5 cumulative mastery; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking

P6 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P6	1	1	1	Number & Algebra	NA-FR	—	Develop	MOE Core	4	Fraction division	1. Divide a proper fraction by a whole number 2. Divide a whole number by a proper fraction 3. Divide a proper fraction by a proper fraction 4. Interpret fraction division in context	Develop fraction division through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve high-value P5 prerequisites	Concept recognition, procedural accuracy, application and explanation
P6	1	2	2	Problem Solving & Mathematical Processes	NA-FR	PS-MODEL, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	4	Fraction mastery problems	1. Solve multi-step fraction-of-remainder problems 2. Use common-unit bar models 3. Find the whole from fractional information 4. Check answers using multiplication	Develop fraction mastery problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fraction division; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	1	3	3	Number & Algebra	NA-PROP	NA-FR	Develop	MOE Core	4	Ratio notation and interpretation	1. Interpret a:b and a:b:c 2. Find ratios of two or three quantities 3. Express ratios in simplest form 4. Compare ratio with fraction language	Develop ratio notation and interpretation through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Fraction mastery problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	1	4	4	Number & Algebra	NA-PROP	—	Develop	MOE Core	4	Equivalent ratios and missing terms	1. Generate equivalent ratios 2. Find a missing term 3. Use scaling and common units 4. Solve ratio tables	Develop equivalent ratios and missing terms through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Ratio notation and interpretation; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	1	5	5	Number & Algebra	NA-PROP	—	Develop	MOE Core	4	Dividing a quantity in a ratio	1. Find total number of parts 2. Find one part 3. Divide a quantity in a given ratio 4. Solve part-part and part-whole ratio problems	Develop dividing a quantity in a ratio through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Equivalent ratios and missing terms; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	1	6	6	Problem Solving & Mathematical Processes	NA-PROP	PS-COMM, NA-AS, PS-CHECK	Develop	MOE Core	4	Changing-ratio problems	1. Represent before and after ratios 2. Track unchanged quantities 3. Solve transfer and addition/removal problems 4. Verify using final ratios	Develop changing-ratio problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Dividing a quantity in a ratio; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	1	7	7	Number & Algebra	NA-PCT	PS-MODEL, NA-FR, PS-CHECK	Develop	MOE Core	4	Percentage: finding the whole	1. Find the whole from a percentage part 2. Use unitary and bar-model methods 3. Connect percentage to fraction and ratio 4. Estimate the original whole	Develop percentage: finding the whole through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Changing-ratio problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	1	8	8	Number & Algebra	NA-PCT	—	Develop	MOE Core	4	Percentage increase and decrease	1. Find percentage increase 2. Find percentage decrease 3. Find a new value after change 4. Distinguish original and final bases	Develop percentage increase and decrease through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Percentage: finding the whole; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	1	9	9	Problem Solving & Mathematical Processes	NA-PCT	PS-MODEL	Develop	MOE Core	4	Complex percentage problems	1. Solve discount tax and interest combinations 2. Solve repeated but non-compound percentage contexts 3. Use before-after models 4. Compare absolute and percentage changes	Develop complex percentage problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Percentage increase and decrease; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	1	10	10	Problem Solving & Mathematical Processes	PS-REASON	NA-FR, NA-WN, NA-DEC, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	Term 1 mastery and transfer	1. Retrieve fraction ratio and percentage 2. Solve multi-step proportional problems 3. Maintain whole-number operations in mixed contexts 4. Maintain decimal operations in mixed contexts 5. Check with inverse relationships	Develop term 1 mastery and transfer through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Complex percentage problems; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	2	1	11	Number & Algebra	NA-PROP	MG-MEAS	Develop	MOE Core	4	Rate and speed	1. Relate distance speed and time 2. Find speed distance or time 3. Calculate average speed as total distance divided by total time 4. Convert time units before calculation	Develop rate and speed through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 1 mastery and transfer; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	2	2	12	Problem Solving & Mathematical Processes	NA-PROP	MG-MEAS, PS-CHECK	Develop	MOE Core	4	Speed problems	1. Solve constant-speed journey problems 2. Interpret distance-time information 3. Solve simple meeting and catch-up problems using constant speeds 4. Check units and reasonableness	Develop speed problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Rate and speed; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	2	3	13	Number & Algebra	NA-ALG	PS-COMM	Develop	MOE Core	4	Algebraic expressions	1. Use letters to represent unknown numbers 2. Interpret a+3 3a and a+3 forms 3. Translate words into expressions 4. Distinguish expression from equation	Develop algebraic expressions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Speed problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	2	4	14	Number & Algebra	PS-REASON	MG-GEO, PS-CHECK	Develop	MOE Core	4	Simplifying and evaluating expressions	1. Combine like terms in simple linear expressions 2. Simplify without brackets 3. Substitute values 4. Check equivalence numerically	Develop simplifying and evaluating expressions through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Algebraic expressions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation

P6 Mathematics - Complete 40-Week Knowledge Point Plan

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P6	2	5	15	Number & Algebra	MG-GEO	NA-WN, PS-CHECK, PS-COMM	Develop	MOE Core	4	Simple linear equations	1. Solve equations with whole-number coefficients 2. Use inverse operations 3. Represent word relationships algebraically 4. Verify solutions by substitution	Develop simple linear equations through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Simplifying and evaluating expressions; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	2	6	16	Statistics	ST-DATA	—	Develop	MOE Core	4	Average	1. Find average from total and count 2. Find total from average and count 3. Find a missing value 4. Interpret average as balance or equal share	Develop average through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Simple linear equations; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence
P6	2	7	17	Problem Solving & Mathematical Processes	ST-DATA	PS-REASON	Extend	Advanced Bridge / Extension	4	Advanced average problems	1. Handle changed averages 2. Combine two data groups 3. Solve missing-item average problems 4. Judge claims based on averages	Develop advanced average problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Average; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	2	8	18	Measurement & Geometry	MG-GEO	PS-COMM	Develop	MOE Core	4	Angles in geometric figures	1. Use triangle and quadrilateral properties 2. Use angles on lines and at points 3. Find unknown angles in composite figures 4. State a complete chain of reasons	Develop angles in geometric figures through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Advanced average problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	2	9	19	Measurement & Geometry	MG-GEO	—	Develop	MOE Core	4	Special quadrilaterals	1. Apply properties of parallelogram rhombus trapezium rectangle and square 2. Use parallel-line angle relationships 3. Find unknown angles 4. Avoid assumptions from appearance	Develop special quadrilaterals through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Angles in geometric figures; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	2	10	20	Problem Solving & Mathematical Processes	PS-REASON	NA-PROP, NA-FR, NA-DEC	Master / Transfer	Spiral Maintenance / Transfer	5	Term 2 mastery and reasoning	1. Retrieve algebra average speed and angle knowledge 2. Maintain fraction operations accurately 3. Maintain decimal operations accurately 4. Solve one complex geometry problem 5. Model a speed or ratio problem	Develop term 2 mastery and reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Special quadrilaterals; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	3	1	21	Measurement & Geometry	MG-GEO	MG-MEAS	Develop / Apply	MOE Core	4	Circle concepts and formulae	1. Identify radius diameter centre and circumference 2. Use diameter = 2 × radius 3. Use circumference formula 4. Use area formula	Develop circle concepts and formulae through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 2 mastery and reasoning; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	3	2	22	Measurement & Geometry	MG-GEO	MG-MEAS	Develop / Apply	MOE Core	4	Semicircles and quarter circles	1. Find arc and perimeter of a semicircle 2. Find area of a semicircle 3. Find arc and perimeter of a quarter circle 4. Find area of a quarter circle	Develop semicircles and quarter circles through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Circle concepts and formulae; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	3	3	23	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	4	Composite area with circles	1. Decompose composite figures 2. Add and subtract areas involving circles 3. Find shaded area 4. Use consistent units and π	Develop composite area with circles through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Semicircles and quarter circles; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	3	4	24	Measurement & Geometry	MG-MEAS	—	Develop / Apply	MOE Core	4	Composite perimeter with curves	1. Trace only the external boundary 2. Combine straight and curved lengths 3. Avoid including internal edges 4. Solve missing-length perimeter problems	Develop composite perimeter with curves through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Composite area with circles; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	3	5	25	Measurement & Geometry	MG-MEAS	—	Master / Transfer	Spiral Maintenance / Transfer	4	Volume of cube and cuboid mastery	1. Find a missing cuboid dimension 2. Find cube edge from volume 3. Find height from volume and base area 4. Find face area from volume and one dimension	Develop volume of cube and cuboid mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Composite perimeter with curves; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	3	6	26	Problem Solving & Mathematical Processes	MG-MEAS	—	Develop / Apply	MOE Core	4	Volume and liquid-level problems	1. Relate base area height and volume 2. Solve transfer between rectangular tanks 3. Find change in water level 4. Apply unit conversions accurately	Develop volume and liquid-level problems through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Volume of cube and cuboid mastery; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	3	7	27	Measurement & Geometry	PS-REASON	MG-MEAS	Master / Transfer	Spiral Maintenance / Transfer	4	Composite figures mastery	1. Find area of square rectangle triangle semicircle and quarter circle combinations 2. Find perimeter of composite figures 3. Use area subtraction efficiently 4. Solve reverse dimension problems	Develop composite figures mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Volume and liquid-level problems; cumulative fluency from earlier terms.	Concept recognition, procedural accuracy, application and explanation
P6	3	8	28	Statistics	ST-DATA	PS-COMM, NA-PCT, NA-DEC, PS-REASON	Develop / Apply	Spiral Maintenance / Transfer	5	Data synthesis and numerical maintenance	1. Interpret tables line graphs and pie charts 2. Combine information from two representations 3. Use average ratio or percentage with data 4. Apply decimal operations in data contexts 5. Evaluate a conclusion against evidence	Develop data synthesis and numerical maintenance through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Composite figures mastery; cumulative fluency from earlier terms.	Data reading, calculation, interpretation and evidence

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Grade	Term	Term Week	Annual Week	Domain	Primary Family	Supporting Families	Learning Stage	Core Status	KP Count	Weekly Focus	3-5 Assessable Knowledge Points	Advanced Learning Focus	Spiral Retrieval	Assessment Emphasis
P6	3	9	29	Problem Solving & Mathematical Processes	PS-MODEL	PS-COMM	Master / Transfer	Spiral Maintenance / Transfer	4	Model-method mastery	1. Select common-unit before-after or comparison models 2. Represent changing ratios and percentages 3. Translate models into equations 4. Use model labels to prevent logical errors	Develop model-method mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Data synthesis and numerical maintenance; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	3	10	30	Problem Solving & Mathematical Processes	PS-REASON	ST-DATA, MG-MEAS	Master / Transfer	Spiral Maintenance / Transfer	5	Term 3 mastery and application	1. Integrate circles volume data and proportional reasoning 2. Solve a complex composite figure 3. Solve a tank-volume problem 4. Convert measurement units within multi-step problems 5. Interpret multi-source data	Develop term 3 mastery and application through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Model-method mastery; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	1	31	Problem Solving & Mathematical Processes	PS-HEUR	PS-CHECK	Consolidate	MOE Core	4	Heuristic: working backward and before-after	1. Work backward from a final value 2. Track quantities before and after change 3. Use inverse operations systematically 4. Validate the reconstructed starting condition	Develop heuristic: working backward and before-after through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Term 3 mastery and application; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	2	32	Problem Solving & Mathematical Processes	PS-HEUR	—	Consolidate	MOE Core	4	Heuristic: assumption and difference	1. Make an assumption 2. Calculate the resulting difference 3. Use unit difference to correct the assumption 4. Apply to heads-and-legs or value problems	Develop heuristic: assumption and difference through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Heuristic: working backward and before-after; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	3	33	Problem Solving & Mathematical Processes	NA-ALG	PS-HEUR, PS-REASON	Consolidate	MOE Core	4	Heuristic: patterns and systematic listing	1. Identify invariant and changing features 2. Make a systematic list or table 3. Generalise a pattern 4. Prove completeness in age-appropriate language	Develop heuristic: patterns and systematic listing through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Heuristic: assumption and difference; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	4	34	Problem Solving & Mathematical Processes	PS-HEUR	NA-FR, PS-REASON	Consolidate	MOE Core	4	Non-routine proportional reasoning	1. Connect fraction ratio percentage and rate 2. Choose a common unit 3. Solve multi-stage proportional changes 4. Compare alternative efficient methods	Develop non-routine proportional reasoning through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Heuristic: patterns and systematic listing; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	5	35	Problem Solving & Mathematical Processes	MG-MEAS	PS-COMM	Consolidate	MOE Core	4	Non-routine geometry and measurement	1. Extract necessary information from complex diagrams 2. Combine angle area perimeter and volume 3. Use auxiliary reasoning without relying on scale 4. Present justified steps	Develop non-routine geometry and measurement through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Non-routine proportional reasoning; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	6	36	Problem Solving & Mathematical Processes	PS-CHECK	NA-WN	Master / Transfer	Spiral Maintenance / Transfer	5	PSLE Paper 1 readiness	1. Maintain whole-number operations 2. Retrieve arithmetic facts and formulas 3. Solve concise short-answer questions 4. Use estimation to eliminate errors 5. Manage time and calculator restrictions appropriately	Develop psle paper 1 readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Non-routine geometry and measurement; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	7	37	Problem Solving & Mathematical Processes	PS-COMM	NA-FR, NA-DEC, PS-MODEL, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	5	PSLE Paper 2 readiness	1. Maintain fraction operations 2. Maintain decimal operations 3. Organise structured multi-step solutions 4. Use diagrams models and equations 5. Check units rounding and final statements	Develop psle paper 2 readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: PSLE Paper 1 readiness; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	8	38	Problem Solving & Mathematical Processes	PS-CHECK	NA-WN, ST-DATA	Master / Transfer	Spiral Maintenance / Transfer	5	Full-syllabus diagnostic and repair	1. Map errors to atomic KPs 2. Separate conceptual from careless errors 3. Relearn and reassess weak KPs 4. Maintain whole-number fraction and decimal fluency 5. Maintain graph table and measurement interpretation	Develop full-syllabus diagnostic and repair through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: PSLE Paper 2 readiness; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	9	39	Problem Solving & Mathematical Processes	PS-REASON	PS-COMM, PS-CHECK	Master / Transfer	Spiral Maintenance / Transfer	4	P6 integrated mastery	1. Solve balanced advanced problems across all strands 2. Select representations independently 3. Communicate rigorous reasoning 4. Use multiple checks for high-value questions	Develop p6 integrated mastery through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: Full-syllabus diagnostic and repair; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking
P6	4	10	40	Problem Solving & Mathematical Processes	PS-REASON	NA-ALG, ST-DATA	Master / Transfer	Spiral Maintenance / Transfer	5	P6 year-end mastery and secondary readiness	1. Master PSLE core content and processes 2. Transfer knowledge across unfamiliar contexts 3. Use algebraic and proportional reasoning confidently 4. Interpret data and geometry critically 5. Demonstrate accuracy efficiency and perseverance	Develop p6 year-end mastery and secondary readiness through accurate representations, explanation, strategy choice and one unfamiliar application.	Retrieve: P6 integrated mastery; cumulative fluency from earlier terms.	Structured problem solving, method choice, reasoning and checking

Atomic Knowledge Point Register

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KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
NA001	NA-WN	Number & Algebra	Count objects accurately using one-to-one correspondence	P1 W1	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA002	NA-WN	Number & Algebra	Recognise numerals 0 to 10	P1 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA003	NA-WN	Number & Algebra	Match numerals to quantities	P1 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA004	PS-REASON	Number & Algebra	Subitise small quantities and explain how they are seen	P1 W1	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA005	PS-COMM	Number & Algebra	Represent numbers with objects, drawings, ten-frames and number lines	P1 W2	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA006	NA-WN	Number & Algebra	Read and write number words to ten	P1 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA007	NA-WN	Number & Algebra	Compare two sets using more, fewer and equal	P1 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA008	NA-WN	Number & Algebra	Order numbers from least to greatest	P1 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA009	NA-WN	Number & Algebra	Decompose numbers within 10 in more than one way	P1 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA010	NA-WN	Number & Algebra	Complete part-part-whole number bonds	P1 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA011	NA-WN	Number & Algebra	Identify missing parts in number bonds	P1 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA012	PS-REASON	Number & Algebra	Explain commutative pairs using concrete models	P1 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA013	NA-AS	Number & Algebra	Interpret addition as putting together and adding on	P1 W4	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA014	NA-AS	Number & Algebra	Use + and = correctly	P1 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA015	NA-AS	Number & Algebra	Write addition sentences from pictures and stories	P1 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA016	NA-WN	Number & Algebra	Find sums within 10 using counting-on and number bonds	P1 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA017	NA-AS	Number & Algebra	Interpret subtraction as taking away and finding a difference	P1 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA018	NA-AS	Number & Algebra	Use – and = correctly	P1 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA019	NA-AS	Number & Algebra	Write subtraction sentences from pictures and stories	P1 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA020	PS-MODEL	Number & Algebra	Find differences within 10 using concrete and pictorial models	P1 W5	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA021	NA-AS	Number & Algebra	Relate addition facts to subtraction facts	P1 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA022	NA-AS	Number & Algebra	Build fact families within 10	P1 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA023	NA-AS	Number & Algebra	Find an unknown part in a simple equation	P1 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA024	PS-CHECK	Number & Algebra	Check subtraction using addition	P1 W6	Introduce	MOE Core	P2W4	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA025	NA-WN	Number & Algebra	Use first to tenth and 1st to 10th	P1 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA026	MG-GEO	Number & Algebra	Describe position in an ordered line	P1 W7	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA027	NA-WN	Number & Algebra	Distinguish ordinal position from quantity	P1 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA028	NA-WN	Number & Algebra	Solve simple position-change problems	P1 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG001	MG-GEO	Measurement & Geometry	Identify circle triangle square and rectangle	P1 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG002	MG-GEO	Measurement & Geometry	Identify cube cuboid cone cylinder and sphere	P1 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG003	MG-GEO	Measurement & Geometry	Sort shapes by observable properties	P1 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG004	MG-GEO	Measurement & Geometry	Compose and decompose simple shapes	P1 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA029	NA-ALG	Number & Algebra	Continue repeating patterns	P1 W9	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA030	NA-ALG	Number & Algebra	Identify the repeating unit	P1 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA031	NA-ALG	Number & Algebra	Create and describe a pattern	P1 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA032	NA-ALG	Number & Algebra	Find a missing item in a visual or number pattern	P1 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS001	PS-REASON	Problem Solving & Mathematical Processes	Retrieve numbers bonds and facts within 10	P1 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS002	NA-AS	Problem Solving & Mathematical Processes	Solve one-step addition and subtraction stories	P1 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS003	PS-REASON	Problem Solving & Mathematical Processes	Explain a chosen strategy using words or pictures	P1 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS004	PS-CHECK	Problem Solving & Mathematical Processes	Identify and correct a simple mathematical error	P1 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS005	NA-ALG	Problem Solving & Mathematical Processes	Complete a short non-routine pattern task	P1 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA033	NA-WN	Number & Algebra	Count forward and backward within 20	P1 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA034	PS-COMM	Number & Algebra	Represent teen numbers as ten and ones	P1 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA035	NA-WN	Number & Algebra	Read and write numerals and number words to 20	P1 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA036	NA-WN	Number & Algebra	Compare and order numbers within 20	P1 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA037	NA-WN	Number & Algebra	Decompose teen numbers into ten and ones	P1 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA038	NA-WN	Number & Algebra	Build number bonds within 20	P1 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA039	NA-WN	Number & Algebra	Use make-ten combinations	P1 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA040	NA-WN	Number & Algebra	Find missing parts within 20	P1 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA041	NA-AS	Number & Algebra	Add within 20 using make-ten	P1 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA042	NA-WN	Number & Algebra	Use counting-on efficiently	P1 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA043	NA-AS	Number & Algebra	Add three one-digit numbers	P1 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA044	NA-AS	Number & Algebra	Choose an efficient addition strategy	P1 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA045	NA-AS	Number & Algebra	Subtract within 20 by taking from ten	P1 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA046	NA-WN	Number & Algebra	Use counting-back and think-addition	P1 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA047	NA-AS	Number & Algebra	Find a difference by comparison	P1 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA048	NA-AS	Number & Algebra	Choose an efficient subtraction strategy	P1 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA049	NA-AS	Number & Algebra	Recall core addition facts within 20	P1 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA050	NA-AS	Number & Algebra	Recall related subtraction facts	P1 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA051	NA-AS	Number & Algebra	Use doubles and near doubles	P1 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA052	NA-AS	Number & Algebra	Use compensation for simple mental sums	P1 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS006	PS-REASON	Problem Solving & Mathematical Processes	Identify the whole and parts in a story	P1 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS007	NA-AS	Problem Solving & Mathematical Processes	Distinguish addition from subtraction situations	P1 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS008	PS-MODEL	Problem Solving & Mathematical Processes	Represent a problem with a bar model	P1 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS009	PS-REASON	Problem Solving & Mathematical Processes	Write a complete number sentence and answer	P1 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS010	PS-REASON	Problem Solving & Mathematical Processes	Interpret more than and fewer than	P1 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS011	PS-REASON	Problem Solving & Mathematical Processes	Find how many more or fewer	P1 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS012	PS-MODEL	Problem Solving & Mathematical Processes	Use a comparison bar model	P1 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS013	PS-CHECK	Problem Solving & Mathematical Processes	Check whether the answer is reasonable	P1 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
ST001	ST-DATA	Statistics	Read a one-to-one picture graph	P1 W18	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST002	ST-DATA	Statistics	Identify greatest least and equal categories	P1 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST003	ST-DATA	Statistics	Find totals and differences from a graph	P1 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge

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ST004	ST-DATA	Statistics	Complete a graph from given data	P1 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST005	ST-DATA	Statistics	Ask and answer questions about picture-graph data	P1 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST006	ST-DATA	Statistics	Combine information from two categories	P1 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST007	ST-DATA	Statistics	Identify a statement supported by data	P1 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST008	PS-REASON	Statistics	Explain one simple observation	P1 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
PS014	PS-REASON	Problem Solving & Mathematical Processes	Retrieve numbers and operations within 20	P1 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS015	PS-REASON	Problem Solving & Mathematical Processes	Solve mixed one-step problems	P1 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS016	ST-DATA	Problem Solving & Mathematical Processes	Interpret a picture graph	P1 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS017	PS-MODEL	Problem Solving & Mathematical Processes	Use a bar model independently	P1 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS018	PS-CHECK	Problem Solving & Mathematical Processes	Check answers using inverse operations	P1 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA053	NA-WN	Number & Algebra	Count in ones and tens to 100	P1 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA054	PS-COMM	Number & Algebra	Represent 2-digit numbers as tens and ones	P1 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA055	NA-WN	Number & Algebra	Read and write numerals and number words to 100	P1 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA056	NA-WN	Number & Algebra	State the value of a digit	P1 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA057	NA-WN	Number & Algebra	Compare 2-digit numbers by place value	P1 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA058	NA-WN	Number & Algebra	Use greater than less than and equal language	P1 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA059	NA-WN	Number & Algebra	Order sets of numbers within 100	P1 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA060	PS-CHECK	Number & Algebra	Locate and estimate numbers on a number line	P1 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA061	NA-WN	Number & Algebra	Count forward and backward by 1 2 5 and 10	P1 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA062	NA-WN	Number & Algebra	Describe a number-sequence rule	P1 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA063	NA-WN	Number & Algebra	Find missing terms in a sequence	P1 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA064	NA-WN	Number & Algebra	Identify an incorrect term	P1 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA065	NA-AS	Number & Algebra	Add tens and ones without renaming	P1 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA066	NA-AS	Number & Algebra	Use place-value models for addition	P1 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA067	NA-WN	Number & Algebra	Record addition vertically with aligned place values	P1 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA068	PS-CHECK	Number & Algebra	Estimate a sum before calculating	P1 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA069	NA-AS	Number & Algebra	Subtract tens and ones without renaming	P1 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA070	NA-AS	Number & Algebra	Use place-value models for subtraction	P1 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA071	NA-WN	Number & Algebra	Record subtraction vertically with aligned place values	P1 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA072	PS-CHECK	Number & Algebra	Estimate a difference before calculating	P1 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA073	NA-AS	Number & Algebra	Regroup ten ones as one ten	P1 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA074	NA-AS	Number & Algebra	Use the standard addition algorithm	P1 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA075	PS-REASON	Number & Algebra	Explain renaming with place-value language	P1 W26	Develop / Apply	MOE Core	P1W27	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA076	PS-CHECK	Number & Algebra	Check a sum by reversing the operation	P1 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA077	NA-AS	Number & Algebra	Regroup one ten as ten ones	P1 W27	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA078	NA-AS	Number & Algebra	Use the standard subtraction algorithm	P1 W27	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA079	PS-CHECK	Number & Algebra	Check a difference using addition	P1 W27	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA080	NA-AS	Number & Algebra	Choose the correct operation from context	P1 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA081	NA-AS	Number & Algebra	Solve one-step problems within 100	P1 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA082	NA-AS	Number & Algebra	Find a missing number in an equation	P1 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA083	NA-AS	Number & Algebra	Use estimation to detect unreasonable answers	P1 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG005	MG-MEAS	Measurement & Geometry	Compare lengths directly and indirectly	P1 W29	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG006	MG-MEAS	Measurement & Geometry	Measure with non-standard units consistently	P1 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG007	MG-MEAS	Measurement & Geometry	Measure and draw lengths in centimetres	P1 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG008	MG-MEAS	Measurement & Geometry	Solve simple length comparison problems	P1 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS019	NA-WN	Problem Solving & Mathematical Processes	Retrieve place value and algorithms within 100	P1 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS020	MG-MEAS	Problem Solving & Mathematical Processes	Solve mixed number and length problems	P1 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS021	PS-REASON	Problem Solving & Mathematical Processes	Explain a method clearly	P1 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

Atomic Knowledge Point Register

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KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
PS022	PS-CHECK	Problem Solving & Mathematical Processes	Correct a common place-value error	P1 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS023	PS-REASON	Problem Solving & Mathematical Processes	Solve one challenge problem with more than one strategy	P1 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA084	NA-MD	Number & Algebra	Interpret multiplication as equal groups	P1 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA085	PS-COMM	Number & Algebra	Use repeated addition to represent groups	P1 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA086	NA-MD	Number & Algebra	Use × and = correctly	P1 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA087	NA-MD	Number & Algebra	Write multiplication sentences from arrays and stories	P1 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA088	NA-FR	Number & Algebra	Interpret division as equal sharing	P1 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA089	NA-MD	Number & Algebra	Interpret division as grouping	P1 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA090	NA-MD	Number & Algebra	Write division stories and number sentences	P1 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA091	NA-FR	Number & Algebra	Recognise when equal sharing is not possible	P1 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA092	NA-MD	Number & Algebra	Link multiplication and division facts	P1 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA093	NA-MD	Number & Algebra	Build simple fact families	P1 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA094	NA-MD	Number & Algebra	Find an unknown group size or number of groups	P1 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA095	PS-CHECK	Number & Algebra	Check division using multiplication	P1 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA096	NA-WN	Number & Algebra	Use skip counting and arrays	P1 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA097	NA-ALG	Number & Algebra	Apply 2 5 and 10 patterns informally	P1 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA098	NA-MD	Number & Algebra	Use doubling for selected facts	P1 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA099	NA-MD	Number & Algebra	Solve one-step multiplication problems	P1 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA100	NA-MD	Number & Algebra	Divide quantities into equal groups	P1 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA101	NA-MD	Number & Algebra	Use known multiplication facts to divide	P1 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA102	NA-MD	Number & Algebra	Solve sharing and grouping problems	P1 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA103	NA-MD	Number & Algebra	Interpret a simple remainder in context as an extension	P1 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG009	MG-MEAS	Measurement & Geometry	Read time to the hour	P1 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG010	MG-MEAS	Measurement & Geometry	Read time to the half-hour	P1 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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MG011	MG-MEAS	Measurement & Geometry	Sequence daily events	P1 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG012	MG-MEAS	Measurement & Geometry	Find simple durations in whole hours	P1 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG013	MG-MEAS	Measurement & Geometry	Recognise Singapore coins and notes	P1 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG014	MG-MEAS	Measurement & Geometry	Count cents to \$1 and dollars to \$100	P1 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG015	MG-MEAS	Measurement & Geometry	Make the same amount in different ways	P1 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG016	MG-MEAS	Measurement & Geometry	Solve simple buying and change problems	P1 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG017	NA-FR	Measurement & Geometry	Share objects into equal groups	P1 W38	Consolidate	Readiness Bridge	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG018	NA-FR	Measurement & Geometry	Recognise equal and unequal parts without formal fraction notation	P1 W38	Consolidate	Readiness Bridge	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG019	MG-GEO	Measurement & Geometry	Identify one half of a simple shape or small set informally	P1 W38	Consolidate	Readiness Bridge	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG020	NA-FR	Measurement & Geometry	Build and describe simple 2D and 3D arrangements	P1 W38	Consolidate	Readiness Bridge	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS024	NA-MD	Problem Solving & Mathematical Processes	Choose between addition subtraction multiplication and division	P1 W39	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS025	PS-MODEL	Problem Solving & Mathematical Processes	Use a drawing table or bar model	P1 W39	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS026	PS-REASON	Problem Solving & Mathematical Processes	Solve a two-part problem with scaffolded steps	P1 W39	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS027	PS-REASON	Problem Solving & Mathematical Processes	Explain why an answer is reasonable	P1 W39	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS028	PS-REASON	Problem Solving & Mathematical Processes	Master core number facts within 20	P1 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS029	NA-AS	Problem Solving & Mathematical Processes	Apply addition and subtraction within 100	P1 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS030	ST-DATA	Problem Solving & Mathematical Processes	Interpret simple graphs measurement time and money	P1 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS031	NA-MD	Problem Solving & Mathematical Processes	Use multiplication and division concepts	P1 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS032	PS-CHECK	Problem Solving & Mathematical Processes	Communicate and check a complete solution	P1 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA104	NA-WN	Number & Algebra	Count in tens and hundreds	P2 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA105	PS-COMM	Number & Algebra	Represent numbers with hundreds tens and ones	P2 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA106	NA-WN	Number & Algebra	Read and write numbers to 1000	P2 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA107	NA-WN	Number & Algebra	State digit values and expanded form	P2 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA108	NA-WN	Number & Algebra	Compare and order 3-digit numbers	P2 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA109	MG-GEO	Number & Algebra	Locate numbers on an open number line	P2 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA110	NA-WN	Number & Algebra	Continue sequences in ones tens and hundreds	P2 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA111	NA-WN	Number & Algebra	Identify odd and even numbers	P2 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA112	NA-AS	Number & Algebra	Add up to three digits using the standard algorithm	P2 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA113	NA-WN	Number & Algebra	Rename across one or more place values	P2 W3	Develop	MOE Core	P2W4	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA114	PS-CHECK	Number & Algebra	Estimate sums using compatible numbers	P2 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA115	PS-CHECK	Number & Algebra	Check addition using subtraction	P2 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA116	NA-AS	Number & Algebra	Subtract up to three digits using the standard algorithm	P2 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA117	PS-CHECK	Number & Algebra	Estimate differences	P2 W4	Develop	MOE Core	P3W4	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA118	NA-AS	Number & Algebra	Add and subtract ones tens or hundreds mentally	P2 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA119	NA-WN	Number & Algebra	Bridge through multiples of 10 or 100	P2 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA120	NA-AS	Number & Algebra	Use compensation and partitioning	P2 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA121	NA-AS	Number & Algebra	Compare the efficiency of two strategies	P2 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS033	NA-AS	Problem Solving & Mathematical Processes	Solve one-step and two-part problems	P2 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS034	PS-MODEL	Problem Solving & Mathematical Processes	Use part-whole and comparison models	P2 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS035	NA-AS	Problem Solving & Mathematical Processes	Identify unnecessary information	P2 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS036	PS-COMM	Problem Solving & Mathematical Processes	Write statements with correct units	P2 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG021	MG-MEAS	Measurement & Geometry	Measure and draw in centimetres	P2 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG022	MG-MEAS	Measurement & Geometry	Measure and compare in metres	P2 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG023	MG-MEAS	Measurement & Geometry	Choose an appropriate unit	P2 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG024	MG-MEAS	Measurement & Geometry	Solve addition and subtraction length problems	P2 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA122	PS-COMM	Number & Algebra	Represent equal groups arrays and repeated addition	P2 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA123	PS-COMM	Number & Algebra	Represent sharing and grouping division	P2 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA124	NA-MD	Number & Algebra	Relate multiplication and division	P2 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA125	NA-MD	Number & Algebra	Write fact families	P2 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA126	NA-MD	Number & Algebra	Recall multiplication facts for 2 5 and 10	P2 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA127	NA-MD	Number & Algebra	Apply corresponding division facts	P2 W9	Develop	MOE Core	P2W13, P3W6	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA128	NA-ALG	Number & Algebra	Use patterns to derive unknown facts	P2 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA129	NA-MD	Number & Algebra	Solve equal-group problems	P2 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS037	NA-WN	Problem Solving & Mathematical Processes	Retrieve place value and operations to 1000	P2 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS038	PS-REASON	Problem Solving & Mathematical Processes	Solve a two-step additive problem	P2 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS039	MG-MEAS	Problem Solving & Mathematical Processes	Apply length measurement	P2 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS040	PS-REASON	Problem Solving & Mathematical Processes	Use table facts in context	P2 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS041	PS-CHECK	Problem Solving & Mathematical Processes	Explain and verify one solution	P2 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG025	MG-MEAS	Measurement & Geometry	Compare mass directly and indirectly	P2 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG026	MG-MEAS	Measurement & Geometry	Measure mass in kilograms and grams	P2 W11	Develop	MOE Core	P3W24	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG027	MG-MEAS	Measurement & Geometry	Choose an appropriate mass unit	P2 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG028	MG-MEAS	Measurement & Geometry	Solve simple mass problems	P2 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG029	MG-MEAS	Measurement & Geometry	Read and write time to five minutes	P2 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG030	MG-MEAS	Measurement & Geometry	Use a.m. and p.m. in familiar contexts	P2 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG031	MG-MEAS	Measurement & Geometry	Relate hours and minutes	P2 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG032	MG-MEAS	Measurement & Geometry	Find simple elapsed time	P2 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA130	NA-MD	Number & Algebra	Recall multiplication facts for 3 and 4	P2 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA131	MG-MEAS	Number & Algebra	Use doubling to derive 4-times facts	P2 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA132	NA-MD	Number & Algebra	Solve contextual multiplication and division	P2 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA133	NA-MD	Number & Algebra	Select multiplication or division from context	P2 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA134	NA-WN	Number & Algebra	Find missing factors or quotients	P2 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA135	PS-MODEL	Number & Algebra	Use bar models for equal-group problems	P2 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA136	PS-CHECK	Number & Algebra	Check division with multiplication	P2 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG033	MG-MEAS	Measurement & Geometry	Count mixed coins and notes	P2 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG034	NA-DEC	Measurement & Geometry	Read and write decimal money notation	P2 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG035	MG-MEAS	Measurement & Geometry	Compare money amounts	P2 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG036	MG-MEAS	Measurement & Geometry	Convert between cents and dollar notation	P2 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS042	MG-MEAS	Problem Solving & Mathematical Processes	Add and subtract money	P2 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS043	MG-MEAS	Problem Solving & Mathematical Processes	Find change	P2 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS044	MG-MEAS	Problem Solving & Mathematical Processes	Solve two-part purchase problems	P2 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS045	PS-CHECK	Problem Solving & Mathematical Processes	Check whether an amount is sufficient	P2 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA137	NA-FR	Number & Algebra	Identify equal parts of a whole	P2 W17	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA138	NA-FR	Number & Algebra	Read and write fraction notation	P2 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA139	NA-FR	Number & Algebra	Identify numerator and denominator informally	P2 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA140	PS-COMM	Number & Algebra	Represent unit and non-unit fractions	P2 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA141	NA-FR	Number & Algebra	Compare unit fractions	P2 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA142	NA-FR	Number & Algebra	Compare like fractions	P2 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA143	NA-FR	Number & Algebra	Order fractions with common denominators	P2 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA144	PS-REASON	Number & Algebra	Justify comparison using models	P2 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA145	NA-FR	Number & Algebra	Add like fractions within one whole	P2 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA146	NA-FR	Number & Algebra	Subtract like fractions within one whole	P2 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA147	PS-REASON	Number & Algebra	Use visual models to explain operations	P2 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA148	NA-FR	Number & Algebra	Solve simple fraction stories	P2 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS046	NA-MD	Problem Solving & Mathematical Processes	Retrieve tables 2 3 4 5 and 10	P2 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS047	MG-MEAS	Problem Solving & Mathematical Processes	Apply money mass and time	P2 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS048	NA-FR	Problem Solving & Mathematical Processes	Compare and operate on simple fractions	P2 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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PS049	PS-REASON	Problem Solving & Mathematical Processes	Solve mixed two-step problems	P2 W20	Master / Transfer	Spiral Maintenance / Transfer	P3W20	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS050	PS-CHECK	Problem Solving & Mathematical Processes	Use inverse operations to check	P2 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG037	MG-MEAS	Measurement & Geometry	Compare capacity directly and indirectly	P2 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG038	MG-MEAS	Measurement & Geometry	Measure volume in litres	P2 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG039	MG-MEAS	Measurement & Geometry	Read simple scales	P2 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG040	MG-MEAS	Measurement & Geometry	Solve addition and subtraction volume problems	P2 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST009	ST-DATA	Statistics	Read picture graphs with one-to-one and simple scales	P2 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST010	ST-DATA	Statistics	Interpret legends accurately	P2 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST011	ST-DATA	Statistics	Find totals and differences	P2 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST012	ST-DATA	Statistics	Complete a graph from a data table	P2 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST013	ST-DATA	Statistics	Ask multi-part questions from picture graphs	P2 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST014	NA-MD	Statistics	Compare categories using multiplication or addition	P2 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST015	ST-DATA	Statistics	Identify supported and unsupported claims	P2 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST016	PS-REASON	Statistics	Explain a simple trend or pattern	P2 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
MG041	MG-GEO	Measurement & Geometry	Identify triangles quadrilaterals circles semicircles and quarter circles	P2 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG042	MG-GEO	Measurement & Geometry	Describe sides and corners	P2 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG043	MG-GEO	Measurement & Geometry	Sort shapes using two properties	P2 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG044	MG-GEO	Measurement & Geometry	Compose shapes using semicircles and quarter circles	P2 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG045	MG-GEO	Measurement & Geometry	Decompose compound shapes into familiar parts	P2 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG046	MG-GEO	Measurement & Geometry	Identify cube cuboid cone cylinder sphere and pyramid	P2 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG047	MG-GEO	Measurement & Geometry	Describe faces edges and vertices informally	P2 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG048	MG-GEO	Measurement & Geometry	Match objects to simple views	P2 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG049	MG-GEO	Measurement & Geometry	Build and describe simple structures	P2 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA149	NA-AS	Number & Algebra	Solve mixed calculations within 1000	P2 W26	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA150	NA-AS	Number & Algebra	Find missing numbers in equations	P2 W26	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA151	NA-AS	Number & Algebra	Use estimation before exact calculation	P2 W26	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA152	PS-CHECK	Number & Algebra	Analyse and correct algorithm errors	P2 W26	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA153	NA-MD	Number & Algebra	Retrieve all P2 multiplication tables	P2 W27	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA154	NA-MD	Number & Algebra	Use multiplication and division fact families	P2 W27	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA155	NA-MD	Number & Algebra	Solve mixed equal-group problems	P2 W27	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA156	NA-MD	Number & Algebra	Interpret simple remainders as an extension	P2 W27	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS051	PS-REASON	Problem Solving & Mathematical Processes	Identify two linked operations	P2 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS052	PS-MODEL	Problem Solving & Mathematical Processes	Use bar models to organise information	P2 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS053	PS-REASON	Problem Solving & Mathematical Processes	Solve additive and multiplicative combinations	P2 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS054	PS-CHECK	Problem Solving & Mathematical Processes	Check each stage of a solution	P2 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA157	NA-ALG	Number & Algebra	Describe growing number patterns	P2 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA158	NA-ALG	Number & Algebra	Find missing terms using a rule	P2 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA159	NA-ALG	Number & Algebra	Relate input and output in a simple table	P2 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA160	NA-ALG	Number & Algebra	Create a pattern satisfying two conditions	P2 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS055	NA-FR	Problem Solving & Mathematical Processes	Integrate number measurement fractions and data	P2 W30	Master / Transfer	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS056	PS-HEUR	Problem Solving & Mathematical Processes	Solve a non-routine classification problem	P2 W30	Master / Transfer	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS057	PS-REASON	Problem Solving & Mathematical Processes	Compare two valid methods	P2 W30	Master / Transfer	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS058	PS-REASON	Problem Solving & Mathematical Processes	Explain an error and improve the solution	P2 W30	Master / Transfer	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS059	PS-CHECK	Problem Solving & Mathematical Processes	Complete a timed mixed-fluency check	P2 W30	Master / Transfer	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA161	PS-REASON	Number & Algebra	Find numbers from digit clues	P2 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA162	PS-REASON	Number & Algebra	Form greatest and least numbers under conditions	P2 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA163	PS-REASON	Number & Algebra	Reason about 1 10 or 100 more or less	P2 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA164	MG-GEO	Number & Algebra	Solve number-line estimation problems	P2 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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PS060	PS-REASON	Problem Solving & Mathematical Processes	Solve comparison problems with an unknown start	P2 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS061	PS-REASON	Problem Solving & Mathematical Processes	Solve two-step change problems	P2 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS062	PS-REASON	Problem Solving & Mathematical Processes	Use working backward in simple contexts	P2 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS063	PS-MODEL	Problem Solving & Mathematical Processes	Write an equation from a bar model	P2 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS064	PS-REASON	Problem Solving & Mathematical Processes	Solve grouping problems with an unknown number of groups	P2 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS065	PS-REASON	Problem Solving & Mathematical Processes	Solve sharing problems with an unknown group size	P2 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS066	PS-REASON	Problem Solving & Mathematical Processes	Compare additive and multiplicative situations	P2 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS067	PS-REASON	Problem Solving & Mathematical Processes	Create a word problem for a given equation	P2 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG050	MG-MEAS	Measurement & Geometry	Choose among cm m g kg and litres	P2 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG051	MG-MEAS	Measurement & Geometry	Convert simple familiar measures without formal algorithms	P2 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG052	MG-MEAS	Measurement & Geometry	Compare measurements in context	P2 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG053	MG-MEAS	Measurement & Geometry	Solve two-step measurement problems	P2 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG054	MG-MEAS	Measurement & Geometry	Read schedules with familiar times	P2 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG055	MG-MEAS	Measurement & Geometry	Find simple duration across an hour	P2 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG056	MG-MEAS	Measurement & Geometry	Plan purchases within a budget	P2 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG057	MG-MEAS	Measurement & Geometry	Solve change and time problems	P2 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA165	NA-FR	Number & Algebra	Find a fraction of a small set using objects	P2 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA166	NA-FR	Number & Algebra	Recognise equivalent halves and quarters visually	P2 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA167	NA-FR	Number & Algebra	Complete one whole with like fractions	P2 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA168	PS-REASON	Number & Algebra	Explain why unequal parts are not fractions of a whole	P2 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST017	ST-DATA	Statistics	Collect categorical data	P2 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST018	ST-DATA	Statistics	Organise data in a tally table	P2 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST019	PS-COMM	Statistics	Represent data in a picture graph	P2 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST020	ST-DATA	Statistics	State a conclusion supported by the data	P2 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge

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PS068	PS-MODEL	Problem Solving & Mathematical Processes	Choose part-whole comparison or equal-group models	P2 W38	Consolidate	MOE Core	P3W36	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS069	PS-COMM	Problem Solving & Mathematical Processes	Represent a two-step problem	P2 W38	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS070	PS-MODEL	Problem Solving & Mathematical Processes	Identify a hidden question	P2 W38	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS071	PS-CHECK	Problem Solving & Mathematical Processes	Check using a different method	P2 W38	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS072	PS-REASON	Problem Solving & Mathematical Processes	Retrieve all core arithmetic facts	P2 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS073	ST-DATA	Problem Solving & Mathematical Processes	Apply all measurement and data skills	P2 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS074	PS-REASON	Problem Solving & Mathematical Processes	Solve multi-topic two-step problems	P2 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS075	PS-REASON	Problem Solving & Mathematical Processes	Interpret mathematical language precisely	P2 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS076	PS-REASON	Problem Solving & Mathematical Processes	Master whole numbers to 1000	P2 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS077	NA-MD	Problem Solving & Mathematical Processes	Master addition subtraction and core tables	P2 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS078	NA-FR	Problem Solving & Mathematical Processes	Apply fractions money time mass length and volume	P2 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS079	ST-DATA	Problem Solving & Mathematical Processes	Interpret picture graphs and shapes	P2 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS080	PS-CHECK	Problem Solving & Mathematical Processes	Reason communicate and verify independently	P2 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA169	NA-WN	Number & Algebra	Count in hundreds and thousands	P3 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA170	PS-COMM	Number & Algebra	Represent four-digit place value	P3 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA171	NA-WN	Number & Algebra	Read and write numerals and number words	P3 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA172	NA-WN	Number & Algebra	Compare and order numbers	P3 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA173	NA-WN	Number & Algebra	Continue sequences with varying steps	P3 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA174	NA-WN	Number & Algebra	Find 1 10 100 or 1000 more or less	P3 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA175	PS-CHECK	Number & Algebra	Estimate positions on number lines	P3 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA176	PS-REASON	Number & Algebra	Use place value to justify comparisons	P3 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA177	NA-AS	Number & Algebra	Use the addition algorithm up to four digits	P3 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA178	NA-WN	Number & Algebra	Rename across multiple places	P3 W3	Develop	MOE Core	P3W4	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA179	PS-CHECK	Number & Algebra	Estimate sums	P3 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA180	PS-CHECK	Number & Algebra	Check using subtraction	P3 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA181	NA-AS	Number & Algebra	Use the subtraction algorithm up to four digits	P3 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA182	PS-CHECK	Number & Algebra	Check using addition	P3 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA183	NA-AS	Number & Algebra	Add two 2-digit numbers mentally	P3 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA184	NA-AS	Number & Algebra	Subtract two 2-digit numbers mentally	P3 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA185	NA-AS	Number & Algebra	Use compensation bridging and partitioning	P3 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA186	PS-REASON	Number & Algebra	Explain strategy efficiency	P3 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA187	NA-MD	Number & Algebra	Recall multiplication facts for 6 7 8 and 9	P3 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA188	NA-MD	Number & Algebra	Use known facts to derive unknown facts	P3 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA189	NA-ALG	Number & Algebra	Identify patterns across tables	P3 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA190	NA-MD	Number & Algebra	Multiply up to three digits by one digit	P3 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA191	PS-CHECK	Number & Algebra	Estimate products	P3 W7	Develop	MOE Core	P4W5	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA192	NA-MD	Number & Algebra	Interpret place-value partial products	P3 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA193	PS-CHECK	Number & Algebra	Check using division or approximation	P3 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA194	NA-MD	Number & Algebra	Divide up to three digits by one digit	P3 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA195	NA-MD	Number & Algebra	Interpret quotient and remainder	P3 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA196	PS-CHECK	Number & Algebra	Estimate quotients	P3 W8	Develop	MOE Core	P4W6	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA197	PS-CHECK	Number & Algebra	Check using multiplication plus remainder	P3 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG058	NA-DEC	Measurement & Geometry	Add and subtract money in decimal notation	P3 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG059	MG-MEAS	Measurement & Geometry	Find change from larger amounts	P3 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG060	MG-MEAS	Measurement & Geometry	Compare purchase options	P3 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG061	MG-MEAS	Measurement & Geometry	Solve two-step money problems	P3 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS081	NA-MD	Problem Solving & Mathematical Processes	Retrieve four operations and tables	P3 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS082	NA-WN	Problem Solving & Mathematical Processes	Solve two-step whole-number problems	P3 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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PS083	MG-MEAS	Problem Solving & Mathematical Processes	Apply money accurately	P3 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS084	PS-CHECK	Problem Solving & Mathematical Processes	Explain estimation and checking	P3 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS085	PS-HEUR	Problem Solving & Mathematical Processes	Solve one non-routine number challenge	P3 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS086	NA-AS	Problem Solving & Mathematical Processes	Solve up to two-step additive problems	P3 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS087	PS-MODEL	Problem Solving & Mathematical Processes	Use part-whole and comparison bar models	P3 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS088	NA-AS	Problem Solving & Mathematical Processes	Handle an unknown start or change	P3 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS089	NA-AS	Problem Solving & Mathematical Processes	Identify redundant information	P3 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS090	NA-MD	Problem Solving & Mathematical Processes	Solve equal-group and comparison problems	P3 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS091	NA-MD	Problem Solving & Mathematical Processes	Use unitary reasoning in simple contexts	P3 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS092	NA-MD	Problem Solving & Mathematical Processes	Interpret remainders appropriately	P3 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS093	PS-MODEL	Problem Solving & Mathematical Processes	Write equations from bar models	P3 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS094	NA-AS	Problem Solving & Mathematical Processes	Select operations in mixed contexts	P3 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS095	NA-AS	Problem Solving & Mathematical Processes	Solve two-step and two-part problems	P3 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS096	PS-MODEL	Problem Solving & Mathematical Processes	Use before-after and comparison models	P3 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS097	PS-CHECK	Problem Solving & Mathematical Processes	Check intermediate and final answers	P3 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
ST021	ST-DATA	Statistics	Read vertical and horizontal bar graphs	P3 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST022	ST-DATA	Statistics	Interpret scales accurately	P3 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST023	ST-DATA	Statistics	Find totals differences and combined categories	P3 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST024	ST-DATA	Statistics	Complete a graph from data	P3 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST025	ST-DATA	Statistics	Answer multi-step questions from bar graphs	P3 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST026	ST-DATA	Statistics	Compare data across categories	P3 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST027	ST-DATA	Statistics	Identify statements supported by data	P3 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST028	PS-REASON	Statistics	Explain one conclusion with evidence	P3 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
MG062	MG-GEO	Measurement & Geometry	Recognise angles as turns	P3 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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MG063	MG-GEO	Measurement & Geometry	Compare angles with a right angle	P3 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG064	MG-GEO	Measurement & Geometry	Identify right angles	P3 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG065	PS-CHECK	Measurement & Geometry	Estimate and classify simple angles informally	P3 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG066	MG-GEO	Measurement & Geometry	Identify perpendicular lines	P3 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG067	MG-GEO	Measurement & Geometry	Identify parallel lines	P3 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG068	MG-GEO	Measurement & Geometry	Relate lines to rectangles and squares	P3 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG069	MG-GEO	Measurement & Geometry	Draw and label examples on grids	P3 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA198	NA-FR	Number & Algebra	Generate equivalent fractions using models	P3 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA199	NA-FR	Number & Algebra	Simplify fractions	P3 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA200	NA-FR	Number & Algebra	Find a missing numerator or denominator	P3 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA201	PS-REASON	Number & Algebra	Explain equivalence multiplicatively	P3 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA202	NA-FR	Number & Algebra	Compare unlike fractions with denominators up to 12	P3 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA203	NA-FR	Number & Algebra	Use equivalent fractions or benchmarks	P3 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA204	NA-FR	Number & Algebra	Order unlike fractions	P3 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA205	PS-REASON	Number & Algebra	Justify comparisons visually and symbolically	P3 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS098	NA-FR	Problem Solving & Mathematical Processes	Retrieve four operations and fractions	P3 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS099	ST-DATA	Problem Solving & Mathematical Processes	Interpret bar graphs	P3 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS100	MG-GEO	Problem Solving & Mathematical Processes	Apply angle and line knowledge	P3 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS101	PS-REASON	Problem Solving & Mathematical Processes	Compare two solution methods	P3 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA206	NA-FR	Number & Algebra	Add related fractions within one whole	P3 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA207	NA-FR	Number & Algebra	Subtract related fractions within one whole	P3 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA208	NA-FR	Number & Algebra	Rename using equivalent fractions	P3 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA209	NA-FR	Number & Algebra	Solve fraction word problems	P3 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA210	NA-FR	Number & Algebra	Find a unit fraction of a set	P3 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA211	NA-FR	Number & Algebra	Find a non-unit fraction of a set	P3 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA212	NA-MD	Number & Algebra	Use division then multiplication	P3 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA213	NA-FR	Number & Algebra	Solve contextual fraction-of-set problems	P3 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG070	MG-MEAS	Measurement & Geometry	Convert between kilometres and metres	P3 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG071	MG-MEAS	Measurement & Geometry	Convert between metres and centimetres	P3 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG072	MG-MEAS	Measurement & Geometry	Measure and compare lengths	P3 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG073	MG-MEAS	Measurement & Geometry	Read measurement scales accurately	P3 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG074	MG-MEAS	Measurement & Geometry	Solve two-step length problems using a common unit	P3 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG075	MG-MEAS	Measurement & Geometry	Convert between kilograms and grams	P3 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG076	MG-MEAS	Measurement & Geometry	Read mass scales accurately	P3 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG077	MG-MEAS	Measurement & Geometry	Compare and combine masses using a common unit	P3 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG078	MG-MEAS	Measurement & Geometry	Solve mass word problems	P3 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG079	MG-MEAS	Measurement & Geometry	Measure capacity in litres and millilitres	P3 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG080	MG-MEAS	Measurement & Geometry	Convert between litres and millilitres	P3 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG081	MG-MEAS	Measurement & Geometry	Read liquid-volume scales accurately	P3 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG082	MG-MEAS	Measurement & Geometry	Compare and combine capacities using a common unit	P3 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG083	MG-MEAS	Measurement & Geometry	Solve capacity word problems	P3 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG084	MG-MEAS	Measurement & Geometry	Distinguish area from perimeter	P3 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG085	MG-MEAS	Measurement & Geometry	Find area by counting square units	P3 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG086	MG-MEAS	Measurement & Geometry	Find perimeter by adding side lengths	P3 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG087	MG-MEAS	Measurement & Geometry	Solve missing-side problems on grids	P3 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG088	MG-MEAS	Measurement & Geometry	Use formulas for rectangle and square area	P3 W27	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG089	MG-MEAS	Measurement & Geometry	Use formulas for perimeter	P3 W27	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG090	MG-MEAS	Measurement & Geometry	Find a missing dimension	P3 W27	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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MG091	MG-MEAS	Measurement & Geometry	Solve composite grid problems as extension	P3 W27	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG092	MG-MEAS	Measurement & Geometry	Tell and write time to the minute using past and to	P3 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG093	MG-MEAS	Measurement & Geometry	Convert hours and minutes to minutes and vice versa	P3 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG094	MG-MEAS	Measurement & Geometry	Find starting time finishing time or duration	P3 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG095	MG-MEAS	Measurement & Geometry	Read 12-hour and 24-hour time in familiar contexts	P3 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG096	MG-MEAS	Measurement & Geometry	Interpret timetables and solve time problems	P3 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS102	MG-MEAS	Problem Solving & Mathematical Processes	Choose correct units and operations	P3 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS103	MG-MEAS	Problem Solving & Mathematical Processes	Solve two-step length mass volume or time problems	P3 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS104	PS-MODEL	Problem Solving & Mathematical Processes	Draw a bar model or timeline	P3 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS105	PS-CHECK	Problem Solving & Mathematical Processes	Check unit consistency	P3 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS106	NA-FR	Problem Solving & Mathematical Processes	Integrate fractions and measurement	P3 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS107	MG-MEAS	Problem Solving & Mathematical Processes	Solve an area-perimeter challenge	P3 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS108	MG-MEAS	Problem Solving & Mathematical Processes	Interpret a timetable	P3 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS109	PS-REASON	Problem Solving & Mathematical Processes	Explain a unit-conversion strategy	P3 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS110	PS-HEUR	Problem Solving & Mathematical Processes	Complete a mixed non-routine task	P3 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA214	PS-REASON	Number & Algebra	Form numbers under digit constraints	P3 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA215	PS-REASON	Number & Algebra	Round informally for estimation	P3 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA216	PS-REASON	Number & Algebra	Find bounds for a reasonable answer	P3 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA217	PS-REASON	Number & Algebra	Detect impossible numerical claims	P3 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA218	PS-REASON	Number & Algebra	Use order implied by a multi-step context	P3 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA219	PS-REASON	Number & Algebra	Find missing digits in algorithms	P3 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA220	PS-CHECK	Number & Algebra	Use inverse operations in equations	P3 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA221	NA-ALG	Number & Algebra	Generalise a calculation pattern	P3 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA222	NA-FR	Number & Algebra	Use 0 one-half and 1 as benchmarks	P3 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

Atomic Knowledge Point Register

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KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
NA223	NA-FR	Number & Algebra	Compare fractions with close values	P3 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA224	NA-WN	Number & Algebra	Find multiple equivalent forms	P3 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA225	PS-REASON	Number & Algebra	Explain a common fraction misconception	P3 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG097	MG-GEO	Measurement & Geometry	Identify symmetry in familiar shapes	P3 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG098	MG-GEO	Measurement & Geometry	Visualise simple turns and positions	P3 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG099	MG-GEO	Measurement & Geometry	Compose shapes to meet constraints	P3 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG100	MG-GEO	Measurement & Geometry	Reason from incomplete diagrams	P3 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST029	ST-DATA	Statistics	Collect and categorise data	P3 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST030	ST-DATA	Statistics	Select a suitable bar-graph scale	P3 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST031	ST-DATA	Statistics	Construct an accurate bar graph	P3 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST032	ST-DATA	Statistics	Write an evidence-based conclusion	P3 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
PS111	PS-COMM	Problem Solving & Mathematical Processes	Represent two-step relationships	P3 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS112	PS-MODEL	Problem Solving & Mathematical Processes	Label bars and units precisely	P3 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS113	PS-MODEL	Problem Solving & Mathematical Processes	Translate a model into equations	P3 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS114	PS-HEUR	Problem Solving & Mathematical Processes	Make a systematic list	P3 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS115	PS-HEUR	Problem Solving & Mathematical Processes	Guess check and improve	P3 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS116	PS-HEUR	Problem Solving & Mathematical Processes	Work backward in a simple problem	P3 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS117	NA-ALG	Problem Solving & Mathematical Processes	Look for a pattern	P3 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS118	PS-REASON	Problem Solving & Mathematical Processes	Solve multi-topic short-answer problems	P3 W38	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS119	PS-REASON	Problem Solving & Mathematical Processes	Explain reasoning with mathematical language	P3 W38	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS120	PS-CHECK	Problem Solving & Mathematical Processes	Check through estimation or inverse operations	P3 W38	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS121	PS-REASON	Problem Solving & Mathematical Processes	Compare an efficient and inefficient method	P3 W38	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS122	PS-REASON	Problem Solving & Mathematical Processes	Retrieve all P3 number and geometry knowledge	P3 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS123	MG-MEAS	Problem Solving & Mathematical Processes	Apply all measurement and statistics skills	P3 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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PS124	PS-REASON	Problem Solving & Mathematical Processes	Solve mixed two-step word problems	P3 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS125	PS-COMM	Problem Solving & Mathematical Processes	Correct representative misconceptions	P3 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS126	NA-AS	Problem Solving & Mathematical Processes	Master whole numbers to 10 000 and four operations	P3 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS127	NA-FR	Problem Solving & Mathematical Processes	Master core fraction relationships	P3 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS128	ST-DATA	Problem Solving & Mathematical Processes	Apply graphs angles lines area perimeter and measures	P3 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS129	PS-HEUR	Problem Solving & Mathematical Processes	Use models heuristics and checking	P3 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS130	PS-REASON	Problem Solving & Mathematical Processes	Transfer learning to unfamiliar contexts	P3 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA226	NA-WN	Number & Algebra	Read and write numbers to 100 000	P4 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA227	PS-COMM	Number & Algebra	Represent place values to ten-thousands	P4 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA228	NA-WN	Number & Algebra	Compare and order large numbers	P4 W1	Develop	MOE Core	P5W1	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA229	NA-WN	Number & Algebra	Continue large-number sequences	P4 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA230	NA-WN	Number & Algebra	Round to nearest 10 100 and 1000	P4 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA231	NA-WN	Number & Algebra	Use $\approx$ correctly	P4 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA232	PS-CHECK	Number & Algebra	Estimate sums differences products and quotients	P4 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA233	PS-CHECK	Number & Algebra	Judge reasonableness using bounds	P4 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA234	NA-WN	Number & Algebra	List factor pairs systematically	P4 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA235	NA-WN	Number & Algebra	Determine whether a 1-digit number is a factor	P4 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA236	NA-WN	Number & Algebra	Find common factors	P4 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA237	NA-ALG	Number & Algebra	Use divisibility patterns as an advanced aid	P4 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA238	NA-WN	Number & Algebra	Generate multiples	P4 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA239	NA-WN	Number & Algebra	Determine whether a number is a multiple	P4 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA240	NA-WN	Number & Algebra	Find common multiples	P4 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA241	NA-WN	Number & Algebra	Relate factors and multiples	P4 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA242	NA-MD	Number & Algebra	Multiply up to four digits by one digit	P4 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
NA243	NA-MD	Number & Algebra	Multiply up to three digits by two digits	P4 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA244	NA-MD	Number & Algebra	Analyse partial products	P4 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA245	NA-MD	Number & Algebra	Divide up to four digits by one digit	P4 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA246	NA-MD	Number & Algebra	Interpret remainders in context	P4 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA247	PS-CHECK	Number & Algebra	Check with multiplication	P4 W6	Develop	MOE Core	P4W26	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS131	NA-WN	Problem Solving & Mathematical Processes	Solve multi-step whole-number problems	P4 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS132	NA-AS	Problem Solving & Mathematical Processes	Apply order from context	P4 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS133	PS-MODEL	Problem Solving & Mathematical Processes	Use bar models and equations	P4 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS134	PS-CHECK	Problem Solving & Mathematical Processes	Evaluate answer reasonableness	P4 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
ST033	ST-DATA	Statistics	Read tables and line graphs	P4 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST034	ST-DATA	Statistics	Interpret scales and intervals	P4 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST035	ST-DATA	Statistics	Find changes and differences	P4 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST036	ST-DATA	Statistics	Connect table values to plotted points	P4 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST037	ST-DATA	Statistics	Describe increase decrease and fluctuation	P4 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST038	NA-PROP	Statistics	Compare rates of change informally	P4 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST039	ST-DATA	Statistics	Identify unsupported claims	P4 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST040	ST-DATA	Statistics	Recognise how a scale can affect visual impression	P4 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
PS135	NA-WN	Problem Solving & Mathematical Processes	Retrieve large numbers factors multiples and algorithms	P4 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS136	PS-REASON	Problem Solving & Mathematical Processes	Solve multi-step problems	P4 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS137	ST-DATA	Problem Solving & Mathematical Processes	Interpret tables and line graphs	P4 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS138	PS-REASON	Problem Solving & Mathematical Processes	Use estimation throughout	P4 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS139	PS-HEUR	Problem Solving & Mathematical Processes	Complete one non-routine task	P4 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA248	NA-FR	Number & Algebra	Relate mixed numbers and improper fractions	P4 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA249	NA-FR	Number & Algebra	Convert between forms	P4 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA250	NA-FR	Number & Algebra	Locate mixed numbers on number lines	P4 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA251	NA-FR	Number & Algebra	Compare values greater than one	P4 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA252	NA-FR	Number & Algebra	Find a fraction of a set	P4 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA253	NA-FR	Number & Algebra	Find the whole from a unit fraction in guided cases	P4 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA254	PS-MODEL	Number & Algebra	Use bar models for fraction-of-set problems	P4 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA255	NA-FR	Number & Algebra	Solve multi-step fraction contexts	P4 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA256	NA-FR	Number & Algebra	Find common denominators within syllabus limits	P4 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA257	NA-FR	Number & Algebra	Add unlike fractions	P4 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA258	NA-FR	Number & Algebra	Subtract unlike fractions	P4 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA259	NA-FR	Number & Algebra	Simplify final answers	P4 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA260	NA-FR	Number & Algebra	Rename between wholes and fractions	P4 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA261	NA-FR	Number & Algebra	Add mixed numbers in guided cases	P4 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA262	NA-FR	Number & Algebra	Subtract mixed numbers in guided cases	P4 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA263	PS-CHECK	Number & Algebra	Check using estimation	P4 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG101	MG-GEO	Measurement & Geometry	Measure angles with a protractor	P4 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG102	MG-GEO	Measurement & Geometry	Draw angles to a given measure	P4 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG103	MG-GEO	Measurement & Geometry	Classify acute right obtuse and reflex angles	P4 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG104	PS-CHECK	Measurement & Geometry	Estimate before measuring	P4 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG105	MG-GEO	Measurement & Geometry	Use angles on a straight line	P4 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG106	MG-GEO	Measurement & Geometry	Use angles at a point	P4 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG107	MG-GEO	Measurement & Geometry	Find unknown angles	P4 W16	Develop	MOE Core	P4W17, P6W19	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG108	PS-REASON	Measurement & Geometry	State reasons in simple angle work	P4 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG109	MG-GEO	Measurement & Geometry	Apply properties of rectangles and squares	P4 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG110	MG-GEO	Measurement & Geometry	Use perpendicular and parallel sides	P4 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
MG111	MG-MEAS	Measurement & Geometry	Find missing lengths from perimeter	P4 W17	Develop	MOE Core	P5W25	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG112	MG-MEAS	Measurement & Geometry	Find area and perimeter of rectangles and squares	P4 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG113	MG-MEAS	Measurement & Geometry	Find missing dimensions	P4 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG114	MG-GEO	Measurement & Geometry	Solve composite rectilinear figures	P4 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG115	MG-MEAS	Measurement & Geometry	Distinguish equal area from equal perimeter	P4 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG116	MG-GEO	Measurement & Geometry	Identify lines of symmetry	P4 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG117	MG-GEO	Measurement & Geometry	Complete symmetric figures	P4 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG118	MG-GEO	Measurement & Geometry	Describe reflection on square grids	P4 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG119	MG-GEO	Measurement & Geometry	Reason about symmetry properties	P4 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS140	NA-FR	Problem Solving & Mathematical Processes	Retrieve fractions angles quadrilaterals and symmetry	P4 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS141	MG-MEAS	Problem Solving & Mathematical Processes	Solve composite area-perimeter problems	P4 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS142	PS-REASON	Problem Solving & Mathematical Processes	Explain angle reasons	P4 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS143	NA-FR	Problem Solving & Mathematical Processes	Use a model for a fraction problem	P4 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS144	PS-REASON	Problem Solving & Mathematical Processes	Correct misconceptions	P4 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA264	PS-COMM	Number & Algebra	Represent tenths hundredths and thousandths	P4 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA265	NA-DEC	Number & Algebra	Read and write decimals	P4 W21	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA266	NA-DEC	Number & Algebra	Compare and order decimals	P4 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA267	NA-DEC	Number & Algebra	Locate decimals on number lines	P4 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA268	NA-DEC	Number & Algebra	Express decimals as fractions	P4 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA269	NA-DEC	Number & Algebra	Express eligible fractions as decimals	P4 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA270	PS-REASON	Number & Algebra	Use place value to explain equivalence	P4 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA271	NA-FR	Number & Algebra	Compare values across forms	P4 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA272	NA-DEC	Number & Algebra	Round to nearest whole number	P4 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA273	NA-DEC	Number & Algebra	Round to one decimal place	P4 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA274	NA-DEC	Number & Algebra	Round to two decimal places	P4 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA275	NA-DEC	Number & Algebra	Use rounded values for estimation	P4 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA276	NA-DEC	Number & Algebra	Align decimal place values	P4 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA277	NA-DEC	Number & Algebra	Add decimals up to two places	P4 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA278	NA-DEC	Number & Algebra	Subtract decimals up to two places	P4 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA279	PS-CHECK	Number & Algebra	Estimate and check decimal answers	P4 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA280	NA-DEC	Number & Algebra	Multiply decimals by a one-digit whole number	P4 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA281	NA-DEC	Number & Algebra	Divide decimals by a one-digit whole number	P4 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA282	NA-DEC	Number & Algebra	Interpret decimal quotients	P4 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA283	NA-DEC	Number & Algebra	Round answers to specified accuracy	P4 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA284	NA-DEC	Number & Algebra	Divide whole numbers to obtain decimal quotients	P4 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA285	NA-DEC	Number & Algebra	Use place-value continuation	P4 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA286	MG-MEAS	Number & Algebra	Interpret quotients in measurement contexts	P4 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST041	ST-DATA	Statistics	Recognise a pie chart as parts of a whole	P4 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST042	NA-FR	Statistics	Relate halves quarters and simple fractions to sectors	P4 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST043	ST-DATA	Statistics	Read values from a labelled pie chart	P4 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST044	ST-DATA	Statistics	Compare categories using sector size	P4 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
MG120	MG-GEO	Measurement & Geometry	Recognise nets of cubes and cuboids	P4 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG121	MG-GEO	Measurement & Geometry	Match nets to solids	P4 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG122	MG-GEO	Measurement & Geometry	Identify opposite and adjacent faces	P4 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG123	MG-GEO	Measurement & Geometry	Complete a missing part of a net	P4 W28	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG124	MG-GEO	Measurement & Geometry	Identify front side and top views	P4 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG125	MG-GEO	Measurement & Geometry	Mentally fold simple nets	P4 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG126	MG-GEO	Measurement & Geometry	Count cubes in simple structures	P4 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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MG127	MG-GEO	Measurement & Geometry	Infer hidden cubes in supported diagrams	P4 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS145	NA-DEC	Problem Solving & Mathematical Processes	Integrate decimals data and nets	P4 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS146	NA-DEC	Problem Solving & Mathematical Processes	Solve decimal word problems	P4 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS147	PS-REASON	Problem Solving & Mathematical Processes	Interpret a simple pie chart	P4 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS148	PS-REASON	Problem Solving & Mathematical Processes	Explain a spatial argument	P4 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS149	PS-REASON	Problem Solving & Mathematical Processes	Complete a multi-topic challenge	P4 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA287	NA-FR	Number & Algebra	Add and subtract numbers to 100 000 accurately	P4 W31	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA288	NA-MD	Number & Algebra	Multiply and divide within P4 syllabus limits	P4 W31	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA289	NA-FR	Number & Algebra	Select operations in multi-step contexts	P4 W31	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA290	NA-FR	Number & Algebra	Use factors to simplify fractions	P4 W31	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA291	PS-CHECK	Number & Algebra	Estimate and verify numerical answers	P4 W31	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS150	NA-DEC	Problem Solving & Mathematical Processes	Solve money and measurement decimal problems	P4 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS151	NA-DEC	Problem Solving & Mathematical Processes	Handle multi-step decimal contexts	P4 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS152	NA-DEC	Problem Solving & Mathematical Processes	Select a sensible degree of accuracy	P4 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS153	PS-CHECK	Problem Solving & Mathematical Processes	Check through inverse operations	P4 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG128	MG-GEO	Measurement & Geometry	Decompose rectilinear composite figures	P4 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG129	MG-MEAS	Measurement & Geometry	Find missing side lengths	P4 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG130	MG-MEAS	Measurement & Geometry	Use area subtraction	P4 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG131	MG-MEAS	Measurement & Geometry	Compare alternative decompositions	P4 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG132	MG-GEO	Measurement & Geometry	Use multiple angle facts in one figure	P4 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG133	PS-REASON	Measurement & Geometry	Infer properties from markings	P4 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG134	PS-REASON	Measurement & Geometry	Distinguish necessary from visual information	P4 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG135	PS-REASON	Measurement & Geometry	Explain each step with a reason	P4 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST045	ST-DATA	Statistics	Collect paired data over time	P4 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge

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ST046	ST-DATA	Statistics	Choose table or line graph	P4 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST047	ST-DATA	Statistics	Construct a line graph	P4 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST048	ST-DATA	Statistics	State trends and limitations	P4 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
PS154	PS-MODEL	Problem Solving & Mathematical Processes	Model multiplicative comparison	P4 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS155	NA-FR	Problem Solving & Mathematical Processes	Model fraction-of-set situations	P4 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS156	NA-WN	Problem Solving & Mathematical Processes	Track units across multiple steps	P4 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS157	PS-MODEL	Problem Solving & Mathematical Processes	Translate models into equations	P4 W36	Consolidate	MOE Core	P6W29	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS158	PS-HEUR	Problem Solving & Mathematical Processes	Make a systematic table	P4 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS159	PS-HEUR	Problem Solving & Mathematical Processes	Use guess check and improve	P4 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS160	PS-HEUR	Problem Solving & Mathematical Processes	Work backward from a final state	P4 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS161	PS-HEUR	Problem Solving & Mathematical Processes	Use before-after relationships	P4 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS162	PS-REASON	Problem Solving & Mathematical Processes	Solve short and structured problems	P4 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS163	NA-DEC	Problem Solving & Mathematical Processes	Combine whole numbers fractions decimals and geometry	P4 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS164	ST-DATA	Problem Solving & Mathematical Processes	Interpret visual and data information	P4 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS165	PS-REASON	Problem Solving & Mathematical Processes	Review errors by knowledge point	P4 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS166	PS-REASON	Problem Solving & Mathematical Processes	Retrieve all P4 content independently	P4 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS167	PS-REASON	Problem Solving & Mathematical Processes	Solve advanced multi-step problems	P4 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS168	PS-COMM	Problem Solving & Mathematical Processes	Select efficient representations	P4 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS169	PS-CHECK	Problem Solving & Mathematical Processes	Verify exact and estimated answers	P4 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS170	NA-WN	Problem Solving & Mathematical Processes	Master numbers to 100 000 factors multiples and operations	P4 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS171	NA-DEC	Problem Solving & Mathematical Processes	Master fractions and decimals	P4 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS172	ST-DATA	Problem Solving & Mathematical Processes	Apply angles area perimeter symmetry nets and data	P4 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS173	PS-HEUR	Problem Solving & Mathematical Processes	Use multi-step models and heuristics	P4 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS174	PS-REASON	Problem Solving & Mathematical Processes	Transfer to unfamiliar problems	P4 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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NA292	NA-WN	Number & Algebra	Read and write numbers to 10 million	P5 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA293	NA-WN	Number & Algebra	Interpret place value to millions	P5 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA294	NA-WN	Number & Algebra	Solve digit-constraint problems	P5 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA295	NA-MD	Number & Algebra	Multiply whole numbers by 10 100 and 1000	P5 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA296	NA-MD	Number & Algebra	Divide whole numbers by 10 100 and 1000	P5 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA297	NA-WN	Number & Algebra	Extend to their multiples	P5 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA298	PS-REASON	Number & Algebra	Explain place-value shifts without adding zeros mechanically	P5 W2	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA299	NA-MD	Number & Algebra	Consolidate addition subtraction multiplication and division of whole numbers	P5 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA300	NA-MD	Number & Algebra	Apply multiplication and division before addition and subtraction	P5 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA301	NA-AS	Number & Algebra	Use brackets correctly	P5 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA302	NA-AS	Number & Algebra	Evaluate multi-operation expressions	P5 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA303	PS-CHECK	Number & Algebra	Estimate and verify results	P5 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA304	NA-WN	Number & Algebra	Express whole-number division as a fraction	P5 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA305	NA-DEC	Number & Algebra	Express fractions as decimals	P5 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA306	NA-FR	Number & Algebra	Interpret fraction as quotient	P5 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA307	NA-FR	Number & Algebra	Locate quotient fractions on number lines	P5 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA308	NA-FR	Number & Algebra	Add mixed numbers	P5 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA309	NA-FR	Number & Algebra	Subtract mixed numbers with renaming	P5 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA310	NA-FR	Number & Algebra	Simplify answers	P5 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA311	PS-CHECK	Number & Algebra	Estimate using benchmark fractions	P5 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA312	NA-FR	Number & Algebra	Multiply proper and improper fractions by whole numbers	P5 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA313	NA-FR	Number & Algebra	Multiply mixed numbers by whole numbers	P5 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA314	NA-FR	Number & Algebra	Use cancellation efficiently	P5 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA315	NA-FR	Number & Algebra	Solve fraction-of-quantity problems	P5 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
NA316	NA-FR	Number & Algebra	Multiply proper fractions	P5 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA317	NA-FR	Number & Algebra	Multiply proper by improper fractions	P5 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA318	NA-FR	Number & Algebra	Multiply two improper fractions	P5 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA319	NA-FR	Number & Algebra	Interpret multiplication of fractions with models	P5 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS175	NA-FR	Problem Solving & Mathematical Processes	Solve multi-step fraction problems	P5 W8	Develop	MOE Core	P5W10	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS176	NA-FR	Problem Solving & Mathematical Processes	Find a fraction of a remainder	P5 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS177	PS-MODEL	Problem Solving & Mathematical Processes	Use bar models for successive parts	P5 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS178	PS-CHECK	Problem Solving & Mathematical Processes	Check answers against the whole	P5 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG136	MG-MEAS	Measurement & Geometry	Identify a base and corresponding perpendicular height	P5 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG137	MG-MEAS	Measurement & Geometry	Derive and use triangle area formula	P5 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG138	MG-MEAS	Measurement & Geometry	Find a missing base or height	P5 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG139	MG-MEAS	Measurement & Geometry	Find composite areas with triangles	P5 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS179	NA-FR	Problem Solving & Mathematical Processes	Retrieve large numbers operations and fractions	P5 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS180	MG-MEAS	Problem Solving & Mathematical Processes	Apply triangle area	P5 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS181	PS-REASON	Problem Solving & Mathematical Processes	Use estimation and cancellation	P5 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS182	PS-REASON	Problem Solving & Mathematical Processes	Complete one advanced challenge	P5 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG140	MG-MEAS	Measurement & Geometry	Use cubic centimetres and cubic metres correctly	P5 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG141	MG-MEAS	Measurement & Geometry	Find volume of cubes cuboids and rectangular tanks	P5 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG142	MG-MEAS	Measurement & Geometry	Use 1 millilitre = 1 cubic centimetre	P5 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG143	MG-MEAS	Measurement & Geometry	Use 1 litre = 1000 cubic centimetres	P5 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG144	MG-MEAS	Measurement & Geometry	Convert among litres millilitres and cubic centimetres in context	P5 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG145	MG-MEAS	Measurement & Geometry	Find a missing dimension from volume	P5 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG146	MG-MEAS	Measurement & Geometry	Compare volumes	P5 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG147	MG-MEAS	Measurement & Geometry	Solve liquid-level problems in rectangular tanks	P5 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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MG148	MG-MEAS	Measurement & Geometry	Use base area × height reasoning	P5 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA320	NA-DEC	Number & Algebra	Add and subtract decimals accurately	P5 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA321	NA-DEC	Number & Algebra	Multiply and divide decimals within syllabus limits	P5 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA322	NA-DEC	Number & Algebra	Multiply and divide decimals by 10 100 and 1000	P5 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA323	NA-WN	Number & Algebra	Extend powers-of-ten reasoning to their multiples	P5 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA324	PS-CHECK	Number & Algebra	Estimate and verify decimal results	P5 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG149	MG-MEAS	Measurement & Geometry	Convert km and m	P5 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG150	MG-MEAS	Measurement & Geometry	Convert m and cm	P5 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG151	MG-MEAS	Measurement & Geometry	Convert kg and g	P5 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG152	MG-MEAS	Measurement & Geometry	Convert L and mL	P5 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA325	NA-PROP	Number & Algebra	Interpret rate as amount per unit	P5 W15	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA326	NA-PROP	Number & Algebra	Find rate	P5 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA327	NA-PROP	Number & Algebra	Find total amount	P5 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA328	NA-PROP	Number & Algebra	Find number of units	P5 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS183	NA-PROP	Problem Solving & Mathematical Processes	Solve rate problems with proportional reasoning	P5 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS184	NA-MD	Problem Solving & Mathematical Processes	Use tables and unitary method	P5 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS185	NA-PROP	Problem Solving & Mathematical Processes	Compare two rates	P5 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS186	NA-PROP	Problem Solving & Mathematical Processes	Track compound units accurately	P5 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA329	NA-PCT	Number & Algebra	Express part of a whole as a percentage	P5 W17	Introduce	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA330	NA-PCT	Number & Algebra	Use % correctly	P5 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA331	NA-DEC	Number & Algebra	Connect fractions decimals and percentages	P5 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA332	PS-CHECK	Number & Algebra	Estimate common percentages	P5 W17	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA333	NA-PCT	Number & Algebra	Find a percentage part of a whole	P5 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA334	NA-PCT	Number & Algebra	Use 1% 10% and benchmark strategies	P5 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA335	NA-PCT	Number & Algebra	Solve percentage word problems	P5 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA336	PS-CHECK	Number & Algebra	Check percentage answers against the whole	P5 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS187	NA-PCT	Problem Solving & Mathematical Processes	Find discount	P5 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS188	NA-PCT	Problem Solving & Mathematical Processes	Find GST in syllabus contexts	P5 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS189	NA-PCT	Problem Solving & Mathematical Processes	Find simple annual interest	P5 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS190	NA-PCT	Problem Solving & Mathematical Processes	Compare final prices	P5 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS191	NA-DEC	Problem Solving & Mathematical Processes	Retrieve volume decimals rate and percentage	P5 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS192	PS-REASON	Problem Solving & Mathematical Processes	Solve unit-conversion problems	P5 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS193	NA-PROP	Problem Solving & Mathematical Processes	Compare rates and prices	P5 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS194	NA-DEC	Problem Solving & Mathematical Processes	Use fraction-decimal-percentage links	P5 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS195	PS-REASON	Problem Solving & Mathematical Processes	Explain solution efficiency	P5 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG153	MG-GEO	Measurement & Geometry	Use angles on a line and at a point	P5 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG154	MG-GEO	Measurement & Geometry	Use vertically opposite angles	P5 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG155	MG-GEO	Measurement & Geometry	Find unknown angles in multi-step diagrams	P5 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG156	PS-REASON	Measurement & Geometry	State reasons accurately	P5 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG157	MG-GEO	Measurement & Geometry	Classify triangles by sides and angles	P5 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG158	MG-GEO	Measurement & Geometry	Use isosceles triangle properties	P5 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG159	MG-GEO	Measurement & Geometry	Use equilateral triangle properties	P5 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG160	MG-GEO	Measurement & Geometry	Use angle sum of a triangle	P5 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG161	MG-GEO	Measurement & Geometry	Find missing triangle angles	P5 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG162	MG-GEO	Measurement & Geometry	Combine line point and triangle facts	P5 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG163	MG-GEO	Measurement & Geometry	Use exterior-angle reasoning as an extension	P5 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG164	MG-GEO	Measurement & Geometry	Distinguish marked facts from visual assumptions	P5 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG165	PS-REASON	Measurement & Geometry	Identify defining properties	P5 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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MG166	MG-GEO	Measurement & Geometry	Use parallel-side angle relationships in guided cases	P5 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG167	MG-GEO	Measurement & Geometry	Compare quadrilaterals	P5 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG168	MG-GEO	Measurement & Geometry	Find unknown angles using properties	P5 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG169	MG-GEO	Measurement & Geometry	Combine triangle and quadrilateral properties	P5 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG170	MG-GEO	Measurement & Geometry	Find unknown angles without extra construction	P5 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG171	PS-REASON	Measurement & Geometry	Explain a chain of geometric reasoning	P5 W25	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST049	ST-DATA	Statistics	Interpret tables line graphs and pie charts	P5 W26	Consolidate	Spiral Maintenance / Transfer	P6W28	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST050	PS-COMM	Statistics	Compare multiple representations	P5 W26	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST051	ST-DATA	Statistics	Calculate totals and differences	P5 W26	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST052	ST-DATA	Statistics	Identify misleading or incomplete claims	P5 W26	Consolidate	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST053	ST-DATA	Statistics	Interpret average as equal sharing	P5 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST054	ST-DATA	Statistics	Find a simple average	P5 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST055	ST-DATA	Statistics	Find a total from average and number of items	P5 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST056	ST-DATA	Statistics	Compare average with individual values	P5 W27	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
NA337	NA-ALG	Number & Algebra	Use a symbol or letter for an unknown	P5 W28	Develop / Apply	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA338	NA-ALG	Number & Algebra	Translate simple verbal relationships	P5 W28	Develop / Apply	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA339	NA-ALG	Number & Algebra	Evaluate a simple expression by substitution	P5 W28	Develop / Apply	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA340	NA-ALG	Number & Algebra	Solve simple missing-value equations	P5 W28	Develop / Apply	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS196	NA-FR	Problem Solving & Mathematical Processes	Model fractions percentages and rates	P5 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS197	PS-MODEL	Problem Solving & Mathematical Processes	Use before-after bars	P5 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS198	PS-MODEL	Problem Solving & Mathematical Processes	Identify a common unit	P5 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS199	PS-MODEL	Problem Solving & Mathematical Processes	Write equations from models	P5 W29	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS200	NA-PCT	Problem Solving & Mathematical Processes	Integrate percentage rate geometry and data	P5 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS201	PS-REASON	Problem Solving & Mathematical Processes	Solve a three-step structured problem	P5 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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PS202	PS-REASON	Problem Solving & Mathematical Processes	Explain geometric reasons	P5 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS203	PS-REASON	Problem Solving & Mathematical Processes	Evaluate a simple expression	P5 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS204	PS-REASON	Problem Solving & Mathematical Processes	Review errors by KP	P5 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA341	NA-FR	Number & Algebra	Use fraction products to compare quantities	P5 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA342	NA-FR	Number & Algebra	Find missing factors in fraction equations	P5 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA343	NA-FR	Number & Algebra	Reason about scaling by a fraction	P5 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA344	NA-FR	Number & Algebra	Solve a fraction pattern problem	P5 W31	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS205	NA-PCT	Problem Solving & Mathematical Processes	Find original price in guided cases	P5 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS206	NA-PCT	Problem Solving & Mathematical Processes	Solve successive discount contexts as extension	P5 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS207	NA-PCT	Problem Solving & Mathematical Processes	Compare percentage and absolute change	P5 W32	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS208	PS-MODEL	Problem Solving & Mathematical Processes	Use before-after models	P5 W32	Extend	Advanced Bridge / Extension	P6W9	Spiral: wider range, reduced scaffolding, more steps or less familiar context.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS209	NA-PROP	Problem Solving & Mathematical Processes	Combine rate with volume	P5 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS210	NA-PROP	Problem Solving & Mathematical Processes	Solve filling and emptying situations without simultaneous rates	P5 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS211	NA-PROP	Problem Solving & Mathematical Processes	Convert units before applying rate	P5 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS212	NA-PROP	Problem Solving & Mathematical Processes	Judge whether a rate answer is realistic	P5 W33	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG172	MG-GEO	Measurement & Geometry	Solve multi-step unknown-angle problems	P5 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG173	MG-GEO	Measurement & Geometry	Use symmetry and quadrilateral properties	P5 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG174	MG-MEAS	Measurement & Geometry	Find triangle areas in composite figures	P5 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG175	PS-REASON	Measurement & Geometry	Reason from partial diagrams	P5 W34	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST057	ST-DATA	Statistics	Collect numerical data	P5 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST058	ST-DATA	Statistics	Calculate and interpret average	P5 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST059	PS-COMM	Statistics	Choose a suitable representation	P5 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST060	ST-DATA	Statistics	State a conclusion and limitation	P5 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
PS213	PS-HEUR	Problem Solving & Mathematical Processes	Use working backward	P5 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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PS214	PS-HEUR	Problem Solving & Mathematical Processes	Use before-after	P5 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS215	PS-HEUR	Problem Solving & Mathematical Processes	Make an assumption in guided cases	P5 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS216	PS-HEUR	Problem Solving & Mathematical Processes	Use a systematic table	P5 W36	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS217	NA-DEC	Problem Solving & Mathematical Processes	Connect fractions decimals percentages and rate	P5 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS218	MG-MEAS	Problem Solving & Mathematical Processes	Combine geometry and measurement	P5 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS219	PS-HEUR	Problem Solving & Mathematical Processes	Interpret a diagram not drawn to scale	P5 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS220	PS-COMM	Problem Solving & Mathematical Processes	Present a logically sequenced solution	P5 W37	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS221	PS-REASON	Problem Solving & Mathematical Processes	Solve short-answer fluency items	P5 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS222	PS-REASON	Problem Solving & Mathematical Processes	Solve structured multi-step items	P5 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS223	NA-WN	Problem Solving & Mathematical Processes	Manage units and rounding	P5 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS224	PS-CHECK	Problem Solving & Mathematical Processes	Check answers strategically	P5 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS225	PS-REASON	Problem Solving & Mathematical Processes	Retrieve all P5 content	P5 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS226	PS-REASON	Problem Solving & Mathematical Processes	Diagnose weak KPs	P5 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS227	PS-REASON	Problem Solving & Mathematical Processes	Redo errors with corrected reasoning	P5 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS228	PS-REASON	Problem Solving & Mathematical Processes	Solve a balanced advanced set	P5 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS229	NA-DEC	Problem Solving & Mathematical Processes	Master fraction decimal percentage and rate relationships	P5 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS230	MG-MEAS	Problem Solving & Mathematical Processes	Master volume triangle area and geometry properties	P5 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS231	ST-DATA	Problem Solving & Mathematical Processes	Use early algebra and average	P5 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS232	PS-HEUR	Problem Solving & Mathematical Processes	Solve complex models and heuristics	P5 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS233	PS-REASON	Problem Solving & Mathematical Processes	Transfer to PSLE-style problems	P5 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA345	NA-FR	Number & Algebra	Divide a proper fraction by a whole number	P6 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA346	NA-FR	Number & Algebra	Divide a whole number by a proper fraction	P6 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA347	NA-FR	Number & Algebra	Divide a proper fraction by a proper fraction	P6 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA348	NA-FR	Number & Algebra	Interpret fraction division in context	P6 W1	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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PS234	NA-FR	Problem Solving & Mathematical Processes	Solve multi-step fraction-of-remainder problems	P6 W2	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS235	PS-MODEL	Problem Solving & Mathematical Processes	Use common-unit bar models	P6 W2	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS236	NA-FR	Problem Solving & Mathematical Processes	Find the whole from fractional information	P6 W2	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS237	PS-CHECK	Problem Solving & Mathematical Processes	Check answers using multiplication	P6 W2	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA349	NA-PROP	Number & Algebra	Interpret a:b and a:b:c	P6 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA350	NA-PROP	Number & Algebra	Find ratios of two or three quantities	P6 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA351	NA-PROP	Number & Algebra	Express ratios in simplest form	P6 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA352	NA-FR	Number & Algebra	Compare ratio with fraction language	P6 W3	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA353	NA-PROP	Number & Algebra	Generate equivalent ratios	P6 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA354	NA-PROP	Number & Algebra	Find a missing term	P6 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA355	NA-PROP	Number & Algebra	Use scaling and common units	P6 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA356	NA-PROP	Number & Algebra	Solve ratio tables	P6 W4	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA357	NA-PROP	Number & Algebra	Find total number of parts	P6 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA358	NA-PROP	Number & Algebra	Find one part	P6 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA359	NA-PROP	Number & Algebra	Divide a quantity in a given ratio	P6 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA360	NA-PROP	Number & Algebra	Solve part-part and part-whole ratio problems	P6 W5	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS238	PS-COMM	Problem Solving & Mathematical Processes	Represent before and after ratios	P6 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS239	NA-PROP	Problem Solving & Mathematical Processes	Track unchanged quantities	P6 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS240	NA-AS	Problem Solving & Mathematical Processes	Solve transfer and addition/removal problems	P6 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS241	PS-CHECK	Problem Solving & Mathematical Processes	Verify using final ratios	P6 W6	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA361	NA-PCT	Number & Algebra	Find the whole from a percentage part	P6 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA362	PS-MODEL	Number & Algebra	Use unitary and bar-model methods	P6 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA363	NA-FR	Number & Algebra	Connect percentage to fraction and ratio	P6 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA364	PS-CHECK	Number & Algebra	Estimate the original whole	P6 W7	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA365	NA-PCT	Number & Algebra	Find percentage increase	P6 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA366	NA-PCT	Number & Algebra	Find percentage decrease	P6 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA367	NA-PCT	Number & Algebra	Find a new value after change	P6 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA368	NA-PCT	Number & Algebra	Distinguish original and final bases	P6 W8	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS242	NA-PCT	Problem Solving & Mathematical Processes	Solve discount tax and interest combinations	P6 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS243	NA-PCT	Problem Solving & Mathematical Processes	Solve repeated but non-compound percentage contexts	P6 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS244	NA-PCT	Problem Solving & Mathematical Processes	Compare absolute and percentage changes	P6 W9	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS245	NA-FR	Problem Solving & Mathematical Processes	Retrieve fraction ratio and percentage	P6 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS246	PS-REASON	Problem Solving & Mathematical Processes	Solve multi-step proportional problems	P6 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS247	NA-WN	Problem Solving & Mathematical Processes	Maintain whole-number operations in mixed contexts	P6 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS248	NA-DEC	Problem Solving & Mathematical Processes	Maintain decimal operations in mixed contexts	P6 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS249	PS-CHECK	Problem Solving & Mathematical Processes	Check with inverse relationships	P6 W10	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA369	NA-PROP	Number & Algebra	Relate distance speed and time	P6 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA370	NA-PROP	Number & Algebra	Find speed distance or time	P6 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA371	NA-PROP	Number & Algebra	Calculate average speed as total distance divided by total time	P6 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA372	MG-MEAS	Number & Algebra	Convert time units before calculation	P6 W11	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS250	NA-PROP	Problem Solving & Mathematical Processes	Solve constant-speed journey problems	P6 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS251	MG-MEAS	Problem Solving & Mathematical Processes	Interpret distance-time information	P6 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS252	NA-PROP	Problem Solving & Mathematical Processes	Solve simple meeting and catch-up problems using constant speeds	P6 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS253	PS-CHECK	Problem Solving & Mathematical Processes	Check units and reasonableness	P6 W12	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
NA373	PS-COMM	Number & Algebra	Use letters to represent unknown numbers	P6 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA374	NA-ALG	Number & Algebra	Interpret $a+3$ $3a$ and $a\div3$ forms	P6 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA375	NA-ALG	Number & Algebra	Translate words into expressions	P6 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA376	NA-ALG	Number & Algebra	Distinguish expression from equation	P6 W13	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

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NA377	MG-GEO	Number & Algebra	Combine like terms in simple linear expressions	P6 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA378	PS-REASON	Number & Algebra	Simplify without brackets	P6 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA379	PS-REASON	Number & Algebra	Substitute values	P6 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA380	PS-CHECK	Number & Algebra	Check equivalence numerically	P6 W14	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA381	NA-WN	Number & Algebra	Solve equations with whole-number coefficients	P6 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA382	PS-CHECK	Number & Algebra	Use inverse operations	P6 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA383	PS-COMM	Number & Algebra	Represent word relationships algebraically	P6 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
NA384	PS-CHECK	Number & Algebra	Verify solutions by substitution	P6 W15	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST061	ST-DATA	Statistics	Find average from total and count	P6 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST062	ST-DATA	Statistics	Find total from average and count	P6 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST063	ST-DATA	Statistics	Find a missing value	P6 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST064	ST-DATA	Statistics	Interpret average as balance or equal share	P6 W16	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
PS254	ST-DATA	Problem Solving & Mathematical Processes	Handle changed averages	P6 W17	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS255	ST-DATA	Problem Solving & Mathematical Processes	Combine two data groups	P6 W17	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS256	ST-DATA	Problem Solving & Mathematical Processes	Solve missing-item average problems	P6 W17	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS257	PS-REASON	Problem Solving & Mathematical Processes	Judge claims based on averages	P6 W17	Extend	Advanced Bridge / Extension	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG176	MG-GEO	Measurement & Geometry	Use triangle and quadrilateral properties	P6 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG177	MG-GEO	Measurement & Geometry	Use angles on lines and at points	P6 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG178	MG-GEO	Measurement & Geometry	Find unknown angles in composite figures	P6 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG179	PS-COMM	Measurement & Geometry	State a complete chain of reasons	P6 W18	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG180	MG-GEO	Measurement & Geometry	Apply properties of parallelogram rhombus trapezium rectangle and square	P6 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG181	MG-GEO	Measurement & Geometry	Use parallel-line angle relationships	P6 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG182	MG-GEO	Measurement & Geometry	Avoid assumptions from appearance	P6 W19	Develop	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
PS258	NA-PROP	Problem Solving & Mathematical Processes	Retrieve algebra average speed and angle knowledge	P6 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

Atomic Knowledge Point Register										
Every distinct KP is independently family-tagged, stage-labelled and classified as MOE core, maintenance or extension.										
KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
PS259	NA-FR	Problem Solving & Mathematical Processes	Maintain fraction operations accurately	P6 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS260	NA-DEC	Problem Solving & Mathematical Processes	Maintain decimal operations accurately	P6 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS261	PS-REASON	Problem Solving & Mathematical Processes	Solve one complex geometry problem	P6 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS262	NA-PROP	Problem Solving & Mathematical Processes	Model a speed or ratio problem	P6 W20	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG183	MG-GEO	Measurement & Geometry	Identify radius diameter centre and circumference	P6 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG184	MG-GEO	Measurement & Geometry	Use diameter = 2 × radius	P6 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG185	MG-GEO	Measurement & Geometry	Use circumference formula	P6 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG186	MG-MEAS	Measurement & Geometry	Use area formula	P6 W21	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG187	MG-MEAS	Measurement & Geometry	Find arc and perimeter of a semicircle	P6 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG188	MG-MEAS	Measurement & Geometry	Find area of a semicircle	P6 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG189	MG-MEAS	Measurement & Geometry	Find arc and perimeter of a quarter circle	P6 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG190	MG-MEAS	Measurement & Geometry	Find area of a quarter circle	P6 W22	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG191	MG-MEAS	Measurement & Geometry	Decompose composite figures	P6 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG192	MG-MEAS	Measurement & Geometry	Add and subtract areas involving circles	P6 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG193	MG-MEAS	Measurement & Geometry	Find shaded area	P6 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG194	MG-MEAS	Measurement & Geometry	Use consistent units and π	P6 W23	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG195	MG-MEAS	Measurement & Geometry	Trace only the external boundary	P6 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG196	MG-MEAS	Measurement & Geometry	Combine straight and curved lengths	P6 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG197	MG-MEAS	Measurement & Geometry	Avoid including internal edges	P6 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG198	MG-MEAS	Measurement & Geometry	Solve missing-length perimeter problems	P6 W24	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG199	MG-MEAS	Measurement & Geometry	Find a missing cuboid dimension	P6 W25	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG200	MG-MEAS	Measurement & Geometry	Find cube edge from volume	P6 W25	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG201	MG-MEAS	Measurement & Geometry	Find height from volume and base area	P6 W25	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG202	MG-MEAS	Measurement & Geometry	Find face area from volume and one dimension	P6 W25	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge

Atomic Knowledge Point Register

Every distinct KP is independently family-tagged, stage-labelled and classified as MOE core, maintenance or extension.

KP ID	Spiral Family	Strand	Atomic Knowledge Point	First Allocation	Learning Stage	Core Status	Later Exact Allocations	Progression / Depth	Assessable Evidence	Reference Basis
PS263	MG-MEAS	Problem Solving & Mathematical Processes	Relate base area height and volume	P6 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS264	MG-MEAS	Problem Solving & Mathematical Processes	Solve transfer between rectangular tanks	P6 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS265	MG-MEAS	Problem Solving & Mathematical Processes	Find change in water level	P6 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS266	MG-MEAS	Problem Solving & Mathematical Processes	Apply unit conversions accurately	P6 W26	Develop / Apply	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
MG203	MG-MEAS	Measurement & Geometry	Find area of square rectangle triangle semicircle and quarter circle combinations	P6 W27	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG204	MG-MEAS	Measurement & Geometry	Find perimeter of composite figures	P6 W27	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG205	MG-MEAS	Measurement & Geometry	Use area subtraction efficiently	P6 W27	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
MG206	PS-REASON	Measurement & Geometry	Solve reverse dimension problems	P6 W27	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Correct representation/procedure plus one application or explanation.	MOE core / user reference / advanced bridge
ST065	PS-COMM	Statistics	Combine information from two representations	P6 W28	Develop / Apply	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST066	NA-PCT	Statistics	Use average ratio or percentage with data	P6 W28	Develop / Apply	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST067	NA-DEC	Statistics	Apply decimal operations in data contexts	P6 W28	Develop / Apply	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
ST068	PS-REASON	Statistics	Evaluate a conclusion against evidence	P6 W28	Develop / Apply	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Accurate extraction/calculation plus a data-supported statement.	MOE core / user reference / advanced bridge
PS267	PS-MODEL	Problem Solving & Mathematical Processes	Select common-unit before-after or comparison models	P6 W29	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS268	PS-COMM	Problem Solving & Mathematical Processes	Represent changing ratios and percentages	P6 W29	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS269	PS-MODEL	Problem Solving & Mathematical Processes	Use model labels to prevent logical errors	P6 W29	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS270	ST-DATA	Problem Solving & Mathematical Processes	Integrate circles volume data and proportional reasoning	P6 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS271	PS-REASON	Problem Solving & Mathematical Processes	Solve a complex composite figure	P6 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS272	MG-MEAS	Problem Solving & Mathematical Processes	Solve a tank-volume problem	P6 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS273	MG-MEAS	Problem Solving & Mathematical Processes	Convert measurement units within multi-step problems	P6 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS274	ST-DATA	Problem Solving & Mathematical Processes	Interpret multi-source data	P6 W30	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS275	PS-HEUR	Problem Solving & Mathematical Processes	Work backward from a final value	P6 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS276	PS-HEUR	Problem Solving & Mathematical Processes	Track quantities before and after change	P6 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS277	PS-CHECK	Problem Solving & Mathematical Processes	Use inverse operations systematically	P6 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS278	PS-HEUR	Problem Solving & Mathematical Processes	Validate the reconstructed starting condition	P6 W31	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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PS279	PS-HEUR	Problem Solving & Mathematical Processes	Make an assumption	P6 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS280	PS-HEUR	Problem Solving & Mathematical Processes	Calculate the resulting difference	P6 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS281	PS-HEUR	Problem Solving & Mathematical Processes	Use unit difference to correct the assumption	P6 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS282	PS-HEUR	Problem Solving & Mathematical Processes	Apply to heads-and-legs or value problems	P6 W32	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS283	NA-ALG	Problem Solving & Mathematical Processes	Identify invariant and changing features	P6 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS284	PS-HEUR	Problem Solving & Mathematical Processes	Make a systematic list or table	P6 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS285	NA-ALG	Problem Solving & Mathematical Processes	Generalise a pattern	P6 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS286	PS-REASON	Problem Solving & Mathematical Processes	Prove completeness in age-appropriate language	P6 W33	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS287	NA-FR	Problem Solving & Mathematical Processes	Connect fraction ratio percentage and rate	P6 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS288	PS-HEUR	Problem Solving & Mathematical Processes	Choose a common unit	P6 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS289	PS-HEUR	Problem Solving & Mathematical Processes	Solve multi-stage proportional changes	P6 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS290	PS-REASON	Problem Solving & Mathematical Processes	Compare alternative efficient methods	P6 W34	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS291	MG-MEAS	Problem Solving & Mathematical Processes	Extract necessary information from complex diagrams	P6 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS292	MG-MEAS	Problem Solving & Mathematical Processes	Combine angle area perimeter and volume	P6 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS293	MG-MEAS	Problem Solving & Mathematical Processes	Use auxiliary reasoning without relying on scale	P6 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS294	PS-COMM	Problem Solving & Mathematical Processes	Present justified steps	P6 W35	Consolidate	MOE Core	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS295	NA-WN	Problem Solving & Mathematical Processes	Maintain whole-number operations	P6 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS296	PS-CHECK	Problem Solving & Mathematical Processes	Retrieve arithmetic facts and formulas	P6 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS297	PS-CHECK	Problem Solving & Mathematical Processes	Solve concise short-answer questions	P6 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS298	PS-CHECK	Problem Solving & Mathematical Processes	Use estimation to eliminate errors	P6 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS299	PS-CHECK	Problem Solving & Mathematical Processes	Manage time and calculator restrictions appropriately	P6 W36	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS300	NA-FR	Problem Solving & Mathematical Processes	Maintain fraction operations	P6 W37	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS301	NA-DEC	Problem Solving & Mathematical Processes	Maintain decimal operations	P6 W37	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS302	PS-COMM	Problem Solving & Mathematical Processes	Organise structured multi-step solutions	P6 W37	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

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PS303	PS-MODEL	Problem Solving & Mathematical Processes	Use diagrams models and equations	P6 W37	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS304	PS-CHECK	Problem Solving & Mathematical Processes	Check units rounding and final statements	P6 W37	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS305	PS-CHECK	Problem Solving & Mathematical Processes	Map errors to atomic KPs	P6 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS306	PS-CHECK	Problem Solving & Mathematical Processes	Separate conceptual from careless errors	P6 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS307	PS-CHECK	Problem Solving & Mathematical Processes	Relearn and reassess weak KPs	P6 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS308	NA-WN	Problem Solving & Mathematical Processes	Maintain whole-number fraction and decimal fluency	P6 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS309	ST-DATA	Problem Solving & Mathematical Processes	Maintain graph table and measurement interpretation	P6 W38	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS310	PS-REASON	Problem Solving & Mathematical Processes	Solve balanced advanced problems across all strands	P6 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS311	PS-COMM	Problem Solving & Mathematical Processes	Select representations independently	P6 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS312	PS-COMM	Problem Solving & Mathematical Processes	Communicate rigorous reasoning	P6 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS313	PS-CHECK	Problem Solving & Mathematical Processes	Use multiple checks for high-value questions	P6 W39	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS314	PS-REASON	Problem Solving & Mathematical Processes	Master PSLE core content and processes	P6 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS315	PS-REASON	Problem Solving & Mathematical Processes	Transfer knowledge across unfamiliar contexts	P6 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS316	NA-ALG	Problem Solving & Mathematical Processes	Use algebraic and proportional reasoning confidently	P6 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS317	ST-DATA	Problem Solving & Mathematical Processes	Interpret data and geometry critically	P6 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge
PS318	PS-REASON	Problem Solving & Mathematical Processes	Demonstrate accuracy efficiency and perseverance	P6 W40	Master / Transfer	Spiral Maintenance / Transfer	—	Standalone allocation; later available for cumulative retrieval.	Complete representation, method, working, answer and verification.	MOE core / user reference / advanced bridge

P1-P6 Spiral Progression Map									
Stable family IDs show where the same high-value idea returns with greater range, abstraction, procedural demand and problem complexity.									
Family ID	Spiral Strand	P1	P2	P3	P4	P5	P6	Required Recurrence	Progression Logic
NA-WN	Whole numbers	to 100; place value; +/–	to 1000; algorithms	to 10 000; four operations	to 100 000; factors/multiples	to 10 million; four operations and order	maintenance within proportional and algebraic problems	P1-P6	Range expands, then emphasis shifts from computation to strategic application.
NA-AS	Addition & subtraction	concepts, bonds and facts to 100	algorithms to 1000; two-step problems	algorithms to 10 000; mental calculation	large-number retrieval and multi-step use	four-operation consolidation and order	maintenance in all PSLE strands	P1-P6	Meaning and fact fluency develop into algorithms, operation choice and strategic maintenance.
NA-MD	Multiplication & division	equal groups; within 40/20	tables 2,3,4,5,10	tables 6-9; algorithms; remainder	larger algorithms and factors/multiples	whole-number and fraction multiplication	fraction division; proportional applications	P1-P6	Concept → fact fluency → algorithms → structure → rational-number operations.
NA-FR	Fractions	equal sharing and equal-parts foundation	part-whole; like fractions	equivalence; related fractions	mixed/improper; unlike addition/subtraction	fraction as division; multiplication	division; ratio connections; complex problems	P1 foundation; P2-P6 formal	Representation → equivalence → operations → proportional transfer.
NA-DEC	Decimals	money notation only	money notation	money calculations	3 decimal places and four operations	four operations, powers of ten and conversion	maintenance with percentage, rate and data	P1-P3 contextual; P4-P6 formal	Contextual notation becomes a formal place-value and operations system.
NA-PCT	Percentage	—	—	—	simple fraction-decimal links	meaning, part of whole, discount/GST/interest	whole, increase/decrease and reverse applications	P4 bridge; P5-P6 formal	Introduced after fraction and decimal foundations, then extended to reverse problems.
NA-PROP	Ratio & rate	equal groups informally	multiplicative groups	unitary reasoning	multiplicative comparison	formal rate and proportional reasoning	formal ratio, changing ratio and speed	P1-P4 foundation; P5-P6 formal	Multiplicative structures progressively become explicit proportional reasoning.
MG-MEAS	Measurement	length, time, money	length, mass, capacity, time, money	unit conversions; area/perimeter	decimal measures; area/perimeter; nets	triangle area; cuboid volume	circles, composite figures, reverse volume	P1-P6	Direct comparison → standard units → formulae → composite and reverse applications.
MG-GEO	Geometry	basic 2D/3D shapes	properties and views	angles; parallel/perpendicular lines	angle measure; rectangle/square; symmetry; nets	triangle and quadrilateral properties	multi-property angle reasoning and circles	P1-P6	Recognition → properties → measurement → deductive geometric reasoning.
ST-DATA	Data	one-to-one picture graphs	scaled picture graphs	bar graphs	tables and line graphs; pie-chart bridge	multiple displays and average bridge	average, graph maintenance and multi-source synthesis	P1-P6	Read → calculate → interpret → evaluate evidence across representations.
NA-ALG	Algebraic thinking	patterns and missing parts	growing patterns and input-output tables	missing-number equations	generalised patterns	letters, expressions and substitution bridge	expressions, simplification and equations	P1-P6	Patterns and unknowns prepare formal symbolic reasoning.
PS-MODEL	Models & representations	one-step part-whole/comparison	two-step and equal-group models	model choice across four operations	fraction and multiplicative models	rate/percentage/before-after models	common-unit and changing-ratio models	Every term P1-P6	Scaffolding fades as relationship complexity increases.

P1-P6 Spiral Progression Map

Stable family IDs show where the same high-value idea returns with greater range, abstraction, procedural demand and problem complexity.

Family ID	Spiral Strand	P1	P2	P3	P4	P5	P6	Required Recurrence	Progression Logic
PS-HEUR	Heuristics	draw and act	work backward in simple contexts	list, pattern and guess-check	systematic table and before-after	assumption and upper-primary heuristics	independent strategy selection	Every term P1-P6	A widening strategy toolkit is matched deliberately to problem structure.
PS-REASON	Reasoning & justification	explain with objects or pictures	compare simple strategies	justify operations and interpretations	state mathematical reasons	connect multiple properties	complete logical chains	Every term P1-P6	Informal explanation develops into explicit evidence-based justification.
PS-CHECK	Estimation & verification	check with inverse or recount	estimate and use inverse operations	verify algorithms and units	bounds, estimation and error analysis	multiple checks across number forms	strategic verification under exam conditions	Every term P1-P6	Checking becomes planned, efficient and matched to the calculation.
PS-COMM	Mathematical communication	number sentences and labels	units and complete statements	models, timelines and working	reasons and labelled diagrams	equations and structured solutions	concise PSLE working and final statements	Every term P1-P6	Communication progresses from representation to rigorous, economical working.

Coverage and Balance Audit

Count of weekly allocations by grade and domain. Counts reflect weekly focus, while every weekly row also embeds mathematical processes.

Grade	Number & Algebra	Measurement & Geometry	Statistics	Problem Solving & Mathematical Processes	Total Weeks	Total KP Allocations
P1	26	5	2	7	40	164
P2	17	9	3	11	40	165
P3	15	10	3	12	40	168
P4	17	9	4	10	40	165
P5	13	10	3	14	40	167
P6	10	8	2	20	40	168

Audit conclusions

Completeness	All six supplied content lists retained and expanded.
Weekly structure	40 weeks per grade; every week has 3-5 assessable KPs.
Spiral learning	Fractions, operations, measurement, geometry, data and problem solving recur with increased depth.
Advanced level	Extensions emphasise reasoning, transfer, models and non-routine problems, not premature secondary content.
Assessment readiness	Atomic register supports one-paper-per-KP diagnostics and later mastery reassessment.
MOE alignment	2021 Primary Mathematics Syllabus (updated Oct 2025), applicable P1-P6 in 2026.

MOE Level-by-Level Alignment Audit

Level boundaries follow the 2021 Primary Mathematics Syllabus updated Oct 2025; advanced elements are labelled as bridges or extensions.

Grade	MOE Core Boundary	User Content List Retained	V3 Optimisation	Required Spiral Maintenance	Advanced Boundary	Status
P1	Whole numbers to 100; +/– within 100; early ×/÷; length, time, money, shapes and picture graphs	All supplied P1 chapters retained	Added equal-sharing/equal-parts foundation without formal fraction notation	Number bonds, operations, shape, data, length, time and money	Subitising, explanation and one unfamiliar application	Aligned
P2	Whole numbers to 1000; algorithms; tables 2,3,4,5,10; like fractions; measures, time, money, graphs and shapes	All supplied P2 chapters retained	Added explicit quarter-circle recognition and composition; protected formal fraction introduction at P2	P1 operations and shapes; P2 fractions, measures and tables	Two-step models, fraction-of-set bridge and data claims	Aligned
P3	Whole numbers to 10 000; tables 6-9; algorithms; equivalent/related fractions; money, measures, time, area/perimeter, graphs and angle/line foundations	All supplied P3 chapters retained	Completed km-m, m-cm, kg-g, L-ml conversions and all required time-to-minute skills	Four operations, tables, fractions, units, graphs and models	Heuristics and evidence-based interpretation	Aligned
P4	Whole numbers to 100 000; factors/multiples; fraction extension; decimals to 3 d.p.; angle measure; area/perimeter, nets, symmetry and data	All supplied P4 chapters retained	Added explicit whole-number four-operation retrieval before upper-primary transfer	Large-number operations, fractions, decimals, units and geometry	Pie-chart bridge and composite challenges remain labelled advanced	Aligned
P5	Whole numbers to 10 million; order of operations; fraction multiplication; decimals; percentage; rate; triangle area; volume; triangle/quadrilateral properties	All supplied P5 chapters retained	Specified 1 ml = 1 cm³ and 1 L = 1000 cm³; retained four-operation consolidation	P4 fractions/decimals; operations, data, measurement and geometry	Average and algebra remain clearly labelled P6 bridges	Aligned
P6	Fraction division; ratio; percentage change; speed; algebra; average; geometric angles; circles; composite area/perimeter and volume	All supplied P6 chapters retained	Made whole-number, fraction, decimal, graph and unit-conversion maintenance explicit	All P1-P5 high-value strands through mixed PSLE contexts	Non-routine transfer and strategic verification, not secondary content	Aligned

Sources, Codes and Use Rules

References guide scope and alignment. The weekly sequencing and advanced extensions are PSLE Checkpoint curriculum-design decisions.

Type	Source / Code	Details	Use in Matrix	Authority	Notes
Official syllabus	MOE 2021 Primary Mathematics Syllabus, updated Oct 2025	https://www.moe.gov.sg/-/media/files/primary/2021-primary-mathematics-syllabus-p1-to-p6-updated-october-2025.pdf	Primary alignment and level boundaries	MOE Singapore	2021 syllabus applies to P1-P6 from 2026.
User reference	Primary 1 content list.jpg	Numbers to 10/20/100; operations; shapes; ordinals; graphs; length; multiplication/division; time; money	Minimum reference scope	User supplied	Content retained and expanded.
User reference	primamry 2 content list.jpg	Numbers to 1000; operations; measures; tables; money; fractions; graphs; shapes	Minimum reference scope	User supplied	Content retained and expanded.
User reference	primary content 3 list.jpg	Numbers to 10 000; operations; money; tables; problems; graphs; angles; lines; fractions; measures; area/perimeter; time	Minimum reference scope	User supplied	Content retained and expanded.
User reference	primary 4 content list.jpg	Numbers to 100 000; factors/multiples; operations; graphs; fractions; angles; rectangles/squares; decimals; pie charts; area/perimeter; nets; symmetry	Minimum reference scope	User supplied	Content retained and expanded.
User reference	primary 5 content list.jpg	Numbers to 10 million; operations; fractions; triangle area; volume; decimals; rate; percentage; angles; triangles; quadrilaterals	Minimum reference scope	User supplied	Content retained and expanded.
User reference	primary 6 content list.jpg	Fractions; ratio; percentage; angles; circles; composite figures; volume; average; algebra	Minimum reference scope	User supplied	Content retained and expanded.
Domain code	Number & Algebra	Number systems, operations, fractions, decimals, percentage, ratio, rate and algebra	Weekly classification	Matrix rule	Processes still embedded.
Domain code	Measurement & Geometry	Measurement, area, volume, geometry and spatial reasoning	Weekly classification	Matrix rule	Processes still embedded.
Domain code	Statistics	Data representation, interpretation and analysis	Weekly classification	Matrix rule	Processes still embedded.
Domain code	Problem Solving & Mathematical Processes	Models, heuristics, reasoning, communication, checking and integrated transfer	Weekly classification	Matrix rule	Not a replacement for content strands.